SEQUENCE LISTING

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      CHARYDCZAK, GLEN
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<211> 2943
<212> DNA
<213> Homo sapiens

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<211> 2862
<212> DNA
<213> Homo sapiens

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<211> 2352
<212> DNA
<213> Homo sapiens

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<211> 2259
<212> DNA
<213> Homo sapiens
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<211> 3102
<212> DNA
<213> Homo sapiens

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<213> Homo sapiens

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<211> 3372
<212> DNA
<213> Homo sapiens

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<211> 2298
<212> DNA
<213> Homo sapiens

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<212> DNA
<213> Homo sapiens

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<212> DNA
<213> Homo sapiens

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<211> 1176
<212> DNA
<213> Homo sapiens

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<211> 681
<212> DNA
<213> Homo sapiens
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<400> 25

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<210> 26
<211> 888
<212> DNA
<213> Homo sapiens

<400> 26

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<210> 27
<211> 1887
<212> DNA
<213> Homo sapiens

<400> 27

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<211> 831
<212> DNA
<213> Homo sapiens

<400> 28
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<210> 29
<211> 858
<212> DNA
<213> Homo sapiens

<400> 29
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```

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<211> 1242
<212> DNA
<213> Homo sapiens
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<210> 31
<211> 963
<212> DNA
<213> Homo sapiens
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<400> 31
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<210> 32
<211> 987
<212> DNA
<213> Homo sapiens

<400> 32
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<213> Homo sapiens

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<211> 666
<212> DNA
<213> Homo sapiens

<400> 34
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<211> 2847
<212> DNA
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<400> 35
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<211> 3387
<212> DNA
<213> Homo sapiens

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<211> 762
<212> DNA
<213> Homo sapiens

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<211> 816
<212> DNA
<213> Homo sapiens

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<210> 41
<211> 1737
<212> DNA
<213> Homo sapiens

<400> 41
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<210> 42
<211> 2913
<212> DNA
<213> Homo sapiens

<400> 42
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<210> 43
<211> 798
<212> DNA
<213> Homo sapiens

<400> 43

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<210> 44
<211> 1365
<212> DNA
<213> Homo sapiens

<400> 44
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<210> 45
<211> 1614
<212> DNA
<213> Homo sapiens

<400> 45
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<210> 46
<211> 981
<212> DNA
<213> Homo sapiens

<400> 46
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<210> 47
<211> 1671
<212> DNA
<213> Homo sapiens

<400> 47
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<210> 48
<211> 894
<212> DNA
<213> Homo sapiens

<400> 48
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<210> 49
<211> 2553
<212> DNA
<213> Homo sapiens

<400> 49
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<210> 51
<211> 1374
<212> DNA
<213> Homo sapiens

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<210> 52
<211> 2457
<212> DNA
<213> Homo sapiens

<400> 52
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<211> 855
<212> DNA
<213> Homo sapiens

<400> 53
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<211> 2409
<212> DNA
<213> Homo sapiens

<400> 54
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<210> 55
<211> 1080
<212> DNA
<213> Homo sapiens

<400> 55
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```
<210> 56
<211> 867
<212> DNA
<213> Homo sapiens
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<400> 56
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```

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<210> 57
<211> 135
<212> DNA
<213> Homo sapiens
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<400> 57
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ggccaacatc actgcggagg cttcctgctg cgagcccgct gggtggtctc ggccgcccag 120
tgcttcagcc acagg                                                    135
```

```
<210> 58
<211> 138
<212> DNA
<213> Homo sapiens
```

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<400> 58
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```

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<210> 59
<211> 930
<212> DNA
<213> Homo sapiens
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<400> 59
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aatacaacct cctgctgggt gactggatgg ggctatactg gaatattcca atatatcaag 720
cgttcttata cactgaagga gctgaaagtg cccctcattg atctccagac atgcggtgac 780
cactatcaaa atgaaatctt gctgcacgga gttgagctca tcatcagtga agctatgatc 840
tgctccaagc tcccagtggg gcagatggat cagtgtactg taagaatcca cccctcaggc 900
acctttcaca ggccttgcct tccccagtga 930
```

<210> 60
<211> 315
<212> PRT
<213> Homo sapiens

<400> 60

```
Met Lys Cys Leu Gly Lys Arg Arg Gly Gln Ala Ala Ala Phe Leu Pro
 1               5                  10                  15

Leu Cys Trp Leu Phe Leu Lys Ile Leu Gln Pro Gly His Ser His Leu
            20                  25                  30

Tyr Asn Asn Arg Tyr Ala Gly Asp Lys Val Ile Arg Phe Ile Pro Lys
        35                  40                  45

Thr Glu Glu Glu Ala Tyr Ala Leu Lys Lys Ile Ser Tyr Gln Leu Lys
    50                  55                  60

Val Asp Leu Trp Gln Pro Ser Ser Ile Ser Tyr Val Ser Glu Gly Thr
65                  70                  75                  80

Val Thr Asp Val His Ile Pro Gln Asn Gly Ser Arg Ala Leu Leu Ala
                85                  90                  95

Phe Leu Gln Glu Ala Asn Ile Gln Tyr Lys Val Leu Ile Glu Asp Leu
            100                 105                 110

Gln Lys Thr Leu Glu Lys Gly Ser Ser Leu His Thr Gln Arg Asn Arg
            115                 120                 125

Arg Ser Leu Ser Gly Tyr Asn Tyr Glu Val Tyr His Ser Leu Glu Glu
    130                 135                 140

Ile Gln Asn Trp Met His His Leu Asn Lys Thr His Ser Gly Leu Ile
145                 150                 155                 160

His Met Phe Ser Ile Gly Arg Ser Tyr Glu Gly Arg Cys Leu Phe Ile
                165                 170                 175

Leu Lys Leu Gly Arg Arg Ser Arg Leu Lys Arg Ala Val Trp Ile Asp
            180                 185                 190
```

```
Cys Gly Ile His Ala Arg Glu Trp Ile Gly Pro Ala Phe Cys Gln Trp
        195                 200             205

Phe Val Lys Glu Ala Leu Leu Thr Tyr Lys Ser Asp Pro Ala Met Arg
    210             215                 220

Lys Met Leu Asn His Leu Tyr Phe Tyr Ile Met Pro Val Phe Asn Val
225                 230                 235                 240

Asp Gly Tyr His Phe Ser Trp Thr Asn Asp Arg Phe Trp Arg Lys Thr
                245                 250                 255

Arg Ser Arg Asn Ser Arg Phe Arg Cys Arg Gly Val Asp Ala Asn Arg
            260                 265                 270

Asn Trp Lys Val Lys Trp Cys Gly Lys Phe Gly Thr Asn Trp Asp Pro
        275                 280                 285

Asp Pro Lys Val Ser Ala Gly Phe Thr Leu Gln Asn Met Ser Pro Glu
    290                 295                 300

Asp Ser His Gly Arg Leu Met Phe Phe Cys Met
305                 310             315
```

```
<210> 61
<211> 374
<212> PRT
<213> Homo sapiens

<400> 61
Met Lys Pro Leu Leu Glu Thr Leu Tyr Leu Leu Gly Met Leu Val Pro
  1             5                 10                  15

Gly Gly Leu Gly Tyr Asp Arg Ser Leu Ala Gln His Arg Gln Glu Ile
            20                  25                  30

Val Asp Lys Ser Val Ser Pro Trp Ser Leu Glu Thr Tyr Ser Tyr Asn
            35                  40                  45

Ile Tyr His Pro Met Gly Glu Ile Tyr Glu Trp Met Arg Glu Ile Ser
    50                  55                  60

Glu Lys Tyr Lys Glu Val Val Thr Gln His Phe Leu Gly Val Thr Tyr
65                  70                  75                  80

Glu Thr His Pro Met Tyr Tyr Leu Lys Ile Ser Gln Pro Ser Gly Asn
                85                  90                  95

Pro Lys Lys Ile Ile Trp Met Asp Cys Gly Ile His Ala Arg Glu Trp
            100                 105                 110

Ile Ala Pro Ala Phe Cys Gln Trp Phe Val Lys Glu Ile Leu Gln Asn
        115                 120                 125

His Lys Asp Asn Ser Ser Ile Arg Lys Leu Leu Arg Asn Leu Asp Phe
    130                 135                 140
```

```
Tyr Val Leu Pro Val Leu Asn Ile Asp Gly Tyr Ile Tyr Thr Trp Thr
145             150             155             160

Thr Asp Arg Leu Trp Arg Lys Ser Arg Ser Pro His Asn Asn Gly Thr
                165             170             175

Cys Phe Gly Thr Asp Leu Asn Arg Asn Phe Asn Ala Ser Trp Cys Ser
            180             185             190

Ile Gly Ala Ser Arg Asn Cys Gln Asp Gln Thr Phe Cys Gly Thr Gly
            195             200             205

Pro Val Ser Glu Pro Glu Thr Lys Ala Val Ala Ser Phe Ile Glu Ser
    210             215             220

Lys Lys Asp Asp Ile Leu Cys Phe Leu Thr Met His Ser Tyr Gly Gln
225             230         ·       235             240

Leu Ile Leu Thr Pro Tyr Gly Tyr Thr Lys Asn Lys Ser Ser Asn His
            245             250             255

Pro Glu Met Ile Gln Val Gly Gln Lys Ala Ala Asn Ala Leu Lys Ala
            260             265             270

Lys Tyr Gly Thr Asn Tyr Arg Val Gly Ser Ser Ala Asp Ile Leu Tyr
    275             280             285

Ala Ser Ser Gly Ser Ser Arg Asp Trp Ala Arg Asp Ile Gly Ile Pro
    290             295             300

Phe Ser Tyr Thr Phe Glu Leu Arg Asp Ser Gly Thr Tyr Gly Phe Val
305             310             315             320

Leu Pro Glu Ala Gln Ile Gln Pro Thr Cys Glu Glu Thr Met Glu Ala
            325             330             335

Val Leu Ser Val Leu Asp Asp Val Tyr Ala Lys His Trp His Ser Asp
            340             345             350

Ser Ala Gly Arg Val Thr Ser Ala Thr Met Leu Leu Gly Leu Leu Val
    355             360             365

Ser Cys Met Ser Leu Leu
    370
```

```
<210> 62
<211> 529
<212> PRT
<213> Homo sapiens

<400> 62
```

```
Met Val Ser Asn Asp Ser His Thr Trp Val Thr Val Lys Asn Gly Ser
 1              5               10              15

Gly Asp Met Ile Phe Glu Gly Asn Ser Glu Lys Glu Ile Pro Val Leu
            20              25              30
```

Asn Glu Leu Pro Val Pro Met Val Ala Arg Tyr Ile Arg Ile Asn Pro
      35   40   45

Gln Ser Trp Phe Asp Asn Gly Ser Ile Cys Met Arg Met Glu Ile Leu
    50   55   60

Gly Cys Pro Leu Pro Asp Pro Asn Asn Tyr Tyr His Arg Arg Asn Glu
65   70   75   80

Met Thr Thr Thr Asp Asp Leu Asp Phe Lys His His Asn Tyr Lys Glu
          85   90   95

Met Arg Gln Leu Met Lys Val Val Asn Glu Met Cys Pro Asn Ile Thr
        100   105   110

Arg Ile Tyr Asn Ile Gly Lys Ser His Gln Gly Leu Lys Leu Tyr Ala
        115   120   125

Val Glu Ile Ser Asp His Pro Gly Glu His Glu Val Gly Glu Pro Glu
    130   135   140

Phe His Tyr Ile Ala Gly Ala His Gly Asn Glu Val Leu Gly Arg Glu
145   150   155   160

Leu Leu Leu Leu Leu Val Gln Phe Val Cys Gln Glu Tyr Leu Ala Arg
        165   170   175

Asn Ala Arg Ile Val His Leu Val Glu Glu Thr Arg Ile His Val Leu
        180   185   190

Pro Ser Leu Asn Pro Asp Gly Tyr Glu Lys Ala Tyr Glu Gly Gly Ser
        195   200   205

Glu Leu Gly Gly Trp Ser Leu Gly Arg Trp Thr His Asp Gly Ile Asp
    210   215   220

Ile Asn Asn Asn Phe Pro Asp Leu Asn Thr Leu Leu Trp Glu Ala Glu
225   230   235   240

Asp Arg Gln Asn Val Pro Arg Lys Val Pro Asn His Tyr Ile Ala Ile
        245   250   255

Pro Glu Trp Phe Leu Ser Glu Asn Ala Thr Val Ala Ala Glu Thr Arg
        260   265   270

Ala Val Ile Ala Trp Met Glu Lys Ile Pro Phe Val Leu Gly Gly Asn
        275   280   285

Leu Gln Gly Gly Glu Leu Val Val Ala Tyr Pro Tyr Asp Leu Val Arg
        290   295   300

Ser Pro Trp Lys Thr Gln Glu His Thr Pro Thr Pro Asp Asp His Val
305   310   315   320

Phe Arg Trp Leu Ala Tyr Ser Tyr Ala Ser Thr His Arg Leu Met Thr
        325   330   335

Asp Ala Arg Arg Arg Val Cys His Thr Glu Asp Phe Gln Lys Glu Glu
        340   345   350

Gly Thr Val Asn Gly Ala Ser Trp His Thr Val Ala Gly Ser Leu Asn
        355   360   365

Asp Phe Ser Tyr Leu His Thr Asn Cys Phe Glu Leu Ser Ile Tyr Val
    370   375   380

Gly Cys Asp Lys Tyr Pro His Glu Ser Gln Leu Pro Glu Glu Trp Glu
385   390   395   400

Asn Asn Arg Glu Ser Leu Ile Val Phe Met Glu Gln Val His Arg Gly
            405   410   415

Ile Lys Gly Leu Val Arg Asp Ser His Gly Lys Gly Ile Pro Asn Ala
        420   425   430

Ile Ile Ser Val Glu Gly Ile Asn His Asp Ile Arg Thr Ala Asn Asp
        435   440   445

Gly Asp Tyr Trp Arg Leu Leu Asn Pro Gly Glu Tyr Val Val Thr Ala
    450   455   460

Lys Ala Glu Gly Phe Thr Ala Ser Thr Lys Asn Cys Met Val Gly Tyr
465   470   475   480

Asp Met Gly Ala Thr Arg Cys Asp Phe Thr Leu Ser Lys Thr Asn Met
            485   490   495

Ala Arg Ile Arg Glu Ile Met Glu Lys Phe Gly Lys Gln Pro Val Ser
            500   505   510

Leu Pro Ala Arg Arg Leu Lys Leu Arg Gly Arg Lys Arg Arg Gln Arg
        515   520   525

Gly

<210> 63
<211> 467
<212> PRT
<213> Homo sapiens

<400> 63
Met Trp Arg Cys Pro Leu Gly Leu Leu Leu Leu Pro Leu Ala Gly
  1   5   10   15

His Leu Ala Leu Gly Ala Gln Gln Gly Arg Gly Arg Arg Glu Leu Ala
            20   25   30

Pro Gly Leu His Leu Arg Gly Ile Arg Asp Ala Gly Gly Arg Tyr Cys
        35   40   45

Gln Glu Gln Asp Leu Cys Cys Arg Gly Arg Ala Asp Asp Cys Ala Leu
    50   55   60

Pro Tyr Leu Gly Ala Ile Cys Tyr Cys Asp Leu Phe Cys Asn Arg Thr
65   70   75   80

Val Ser Asp Cys Cys Pro Asp Phe Trp Asp Phe Cys Leu Gly Val Pro
            85   90   95

Pro Pro Phe Pro Pro Ile Gln Gly Cys Met His Gly Gly Arg Ile Tyr
        100   105   110

Pro Val Leu Gly Thr Tyr Trp Asp Asn Cys Asn Arg Cys Thr Cys Gln
        115   120   125

Glu Asn Arg Gln Trp Gln Cys Asp Gln Glu Pro Cys Leu Val Asp Pro
    130   135   140

Asp Met Ile Lys Ala Ile Asn Gln Gly Asn Tyr Gly Trp Gln Ala Gly
145   150   155   160

Asn His Ser Ala Phe Trp Gly Met Thr Leu Asp Glu Gly Ile Arg Tyr
            165   170   175

Arg Leu Gly Thr Ile Arg Pro Ser Ser Ser Val Met Asn Met His Glu
        180   185   190

Ile Tyr Thr Val Leu Asn Pro Gly Glu Val Leu Pro Thr Ala Phe Glu
        195   200   205

Ala Ser Glu Lys Trp Pro Asn Leu Ile His Glu Pro Leu Asp Gln Gly
    210   215   220

Asn Cys Ala Gly Ser Trp Ala Phe Ser Thr Ala Ala Val Ala Ser Asp
225   230   235   240

Arg Val Ser Ile His Ser Leu Gly His Met Thr Pro Val Leu Ser Pro
            245   250   255

Gln Asn Leu Leu Ser Cys Asp Thr His Gln Gln Gln Gly Cys Arg Gly
            260   265   270

Gly Arg Leu Asp Gly Ala Trp Trp Phe Leu Arg Arg Arg Gly Val Val
        275   280   285

Ser Asp His Cys Tyr Pro Phe Ser Gly Arg Glu Arg Asp Glu Ala Gly
    290   295   300

Pro Ala Pro Pro Cys Met Met His Ser Arg Ala Met Gly Arg Gly Lys
305   310   315   320

Arg Gln Ala Thr Ala His Cys Pro Asn Ser Tyr Val Asn Asn Asn Asp
            325   330   335

Ile Tyr Gln Val Thr Pro Val Tyr Arg Leu Gly Ser Asn Asp Lys Glu
            340   345   350

Ile Met Lys Glu Leu Met Glu Asn Gly Pro Val Gln Ala Leu Met Glu
        355   360   365

Val His Glu Asp Phe Phe Leu Tyr Lys Gly Gly Ile Tyr Ser His Thr
    370   375   380

Pro Val Ser Leu Gly Arg Pro Glu Arg Tyr Arg Arg His Gly Thr His
385   390   395   400

Ser Val Lys Ile Thr Gly Trp Gly Glu Glu Thr Leu Pro Asp Gly Arg
              405   410   415

Thr Leu Lys Tyr Trp Thr Ala Ala Asn Ser Trp Gly Pro Ala Trp Gly
              420   425   430

Glu Arg Gly His Phe Arg Ile Val Arg Gly Val Asn Glu Cys Asp Ile
    435   440   445

Glu Ser Phe Val Leu Gly Val Trp Gly Arg Val Gly Met Glu Asp Met
    450   455   460

Gly His His
465

<210> 64
<211> 3353
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (1891)
<223> Any amino acid

<400> 64
Met Cys Glu Asn Cys Ala Asp Leu Val Glu Val Leu Asn Glu Ile Ser
  1   5   10   15

Asp Val Glu Gly Gly Asp Gly Leu Gln Leu Arg Lys Glu His Thr Leu
              20   25   30

Lys Ile Phe Thr Tyr Ile Asn Ser Trp Thr Gln Arg Gln Cys Leu Cys
          35   40   45

Cys Phe Lys Glu Tyr Lys His Leu Glu Ile Phe Asn Gln Val Val Cys
      50   55   60

Ala Leu Ile Asn Leu Val Ile Ala Gln Val Gln Val Leu Arg Asp Gln
 65   70   75   80

Leu Cys Lys His Cys Thr Thr Ile Asn Ile Asp Ser Thr Trp Gln Asp
              85   90   95

Glu Ser Asn Gln Ala Glu Glu Pro Leu Asn Ile Asp Arg Glu Cys Asn
              100   105   110

Glu Gly Ser Thr Glu Arg Gln Lys Ser Ile Glu Lys Lys Ser Asn Ser
          115   120   125

Thr Arg Ile Cys Asn Leu Thr Glu Glu Glu Ser Ser Lys Ser Ser Asp
    130   135   140

Pro Phe Ser Leu Trp Ser Thr Asp Glu Lys Glu Lys Leu Leu Leu Cys
145   150   155   160

Val Ala Lys Ile Phe Gln Ile Gln Phe Pro Leu Tyr Thr Ala Tyr Lys
           165   170   175

His Asn Thr His Pro Thr Ile Glu Asp Ile Ser Thr Gln Glu Ser Asn
        180   185   190

Ile Leu Gly Ala Phe Cys Asp Met Asn Asp Val Glu Val Pro Leu His
      195   200   205

Leu Leu Arg Tyr Val Cys Leu Phe Cys Gly Lys Asn Gly Leu Ser Leu
    210   215   220

Met Lys Asp Cys Phe Glu Tyr Gly Thr Pro Glu Thr Leu Pro Phe Leu
225   230   235   240

Ile Ala His Ala Phe Ile Thr Val Val Ser Asn Ile Arg Ile Trp Leu
        245   250   255

His Ile Pro Ala Val Met Gln His Ile Ile Pro Phe Arg Thr Tyr Val
        260   265   270

Ile Arg Tyr Leu Cys Lys Leu Ser Asp Gln Glu Leu Arg Gln Ser Ala
      275   280   285

Ala Arg Asn Met Ala Asp Leu Met Trp Ser Thr Val Lys Glu Pro Leu
    290   295   300

Asp Thr Thr Leu Cys Phe Asp Lys Glu Ser Leu Asp Leu Ala Phe Lys
305   310   315   320

Tyr Phe Met Ser Pro Thr Leu Thr Met Arg Leu Ala Gly Leu Ser Gln
        325   330   335

Ile Thr Asn Gln Leu His Thr Phe Asn Asp Val Cys Asn Asn Glu Ser
        340   345   350

Leu Val Ser Asp Thr Glu Thr Ser Ile Ala Lys Glu Leu Ala Asp Trp
      355   360   365

Leu Ile Ser Asn Asn Val Val Glu His Ile Phe Gly Pro Asn Leu His
    370   375   380

Ile Glu Ile Ile Lys Gln Cys Gln Val Ile Leu Asn Phe Leu Ala Ala
385   390   395   400

Glu Gly Arg Leu Ser Thr Gln His Ile Asp Cys Ile Trp Ala Ala Ala
           405   410   415

Gln Leu Lys His Cys Ser Arg Tyr Ile His Asp Leu Phe Pro Ser Leu
        420   425   430

```
Ile Lys Asn Leu Asp Pro Val Pro Leu Arg His Leu Leu Asn Leu Val
        435             440             445

Ser Ala Leu Glu Pro Ser Val His Thr Glu Gln Thr Leu Tyr Leu Ala
        450             455             460

Ser Met Leu Ile Lys Ala Leu Trp Asn Asn Ala Leu Ala Ala Lys Ala
465             470             475             480

Gln Leu Ser Lys Gln Ser Ser Phe Ala Ser Leu Leu Asn Thr Asn Ile
                485             490             495

Pro Ile Gly Asn Lys Lys Glu Glu Glu Glu Leu Arg Arg Thr Ala Pro
            500             505             510

Ser Pro Trp Ser Pro Ala Ala Ser Pro Gln Ser Ser Asp Asn Ser Asp
            515             520             525

Thr His Gln Ser Gly Gly Ser Asp Ile Glu Met Asp Glu Gln Leu Ile
        530             535             540

Asn Arg Thr Lys His Val Gln Gln Arg Leu Ser Asp Thr Glu Glu Ser
545             550             555             560

Met Gln Gly Ser Ser Asp Glu Thr Ala Asn Ser Gly Glu Asp Gly Ser
            565             570             575

Ser Gly Pro Gly Ser Ser Ser Gly His Ser Asp Gly Ser Ser Asn Glu
            580             585             590

Val Asn Ser Ser His Ala Ser Gln Ser Ala Gly Ser Pro Gly Ser Glu
        595             600             605

Val Gln Ser Glu Asp Ile Ala Asp Ile Glu Ala Leu Lys Glu Glu Asp
        610             615             620

Glu Asp Asp Asp His Gly His Asn Pro Pro Lys Ser Ser Cys Gly Thr
625             630             635             640

Asp Leu Arg Asn Arg Lys Leu Glu Ser Gln Ala Gly Ile Cys Leu Gly
            645             650             655

Asp Ser Gln Gly Thr Ser Glu Arg Asn Gly Thr Ser Ser Gly Thr Gly
            660             665             670

Lys Asp Leu Val Phe Asn Thr Glu Ser Leu Pro Ser Val Asp Asn Arg
        675             680             685

Met Arg Met Leu Asp Ala Cys Ser His Ser Glu Asp Pro Glu His Asp
        690             695             700

Ile Ser Gly Glu Met Asn Ala Thr His Ile Ala Gln Gly Ser Gln Glu
705             710             715             720

Ser Cys Ile Thr Arg Thr Gly Asp Phe Leu Gly Glu Thr Ile Gly Asn
                725             730             735
```

Glu Leu Phe Asn Cys Arg Gln Phe Ile Gly Pro Gln His His His
            740   745   750

His His His His His His His His Asp Gly His Met Val Asp Asp Met
        755   760   765

Leu Ser Ala Asp Asp Val Ser Cys Ser Ser Ser Gln Val Ser Ala Lys
    770   775   780

Ser Glu Lys Asn Met Ala Asp Phe Asp Gly Glu Glu Ser Gly Cys Glu
785   790   795   800

Glu Glu Leu Val Gln Ile Asn Ser His Ala Glu Leu Thr Ser His Leu
            805   810   815

Gln Gln His Leu Pro Asn Leu Ala Ser Ile Tyr His Glu His Leu Ser
        820   825   830

Gln Gly Pro Val Val His Lys His Gln Phe Asn Ser Asn Ala Val Thr
        835   840   845

Asp Ile Asn Leu Asp Asn Val Cys Lys Lys Gly Asn Thr Leu Leu Trp
    850   855   860

Asp Ile Val Gln Asp Glu Asp Ala Val Asn Leu Ser Glu Gly Leu Ile
865   870   875   880

Asn Glu Ala Glu Lys Leu Leu Cys Ser Leu Val Cys Trp Phe Thr Asp
            885   890   895

Arg Gln Ile Arg Met Arg Phe Ile Glu Gly Cys Leu Glu Asn Leu Gly
            900   905   910

Asn Asn Arg Ser Val Val Ile Ser Leu Arg Leu Leu Pro Lys Leu Phe
        915   920   925

Gly Thr Phe Gln Gln Phe Gly Ser Ser Tyr Asp Thr His Trp Ile Thr
    930   935   940

Met Trp Ala Glu Lys Glu Leu Asn Met Met Lys Leu Phe Phe Asp Asn
945   950   955   960

Leu Val Tyr Tyr Ile Gln Thr Val Arg Glu Gly Arg Gln Lys His Ala
            965   970   975

Leu Tyr Ser His Ser Ala Glu Val Gln Val Arg Leu Gln Phe Leu Thr
            980   985   990

Cys Val Phe Ser Thr Leu Gly Ser Pro Asp His Phe Arg Leu Ser Leu
        995   1000   1005

Glu Gln Val Asp Ile Leu Trp His Cys Leu Val Glu Asp Ser Glu Cys
    1010   1015   1020

Tyr Asp Asp Ala Leu His Trp Phe Leu Asn Gln Val Arg Ser Lys Asp
1025   1030   1035   1040

Gln His Ala Met Gly Met Glu Thr Tyr Lys His Leu Phe Leu Glu Lys
            1045   1050   1055

Met Pro Gln Leu Lys Pro Glu Thr Ile Ser Met Thr Gly Leu Asn Leu
          1060   1065   1070

Phe Gln His Leu Cys Asn Leu Ala Arg Leu Ala Thr Ser Ala Tyr Asp
       1075   1080   1085

Gly Cys Ser Asn Ser Glu Leu Cys Gly Met Asp Gln Phe Trp Gly Ile
    1090   1095   1100

Ala Leu Arg Ala Gln Ser Gly Asp Val Ser Arg Ala Ala Ile Gln Tyr
1105   1110   1115   1120

Ile Asn Ser Tyr Tyr Ile Asn Gly Lys Thr Gly Leu Glu Lys Glu Gln
        1125   1130   1135

Glu Phe Ile Ser Lys Cys Met Glu Ser Leu Met Ile Ala Ser Ser Ser
       1140   1145   1150

Leu Glu Gln Glu Ser His Ser Ser Leu Met Val Ile Glu Arg Gly Leu
     1155   1160   1165

Leu Met Leu Lys Thr His Leu Glu Ala Phe Arg Arg Arg Phe Ala Tyr
    1170   1175   1180

His Leu Arg Gln Trp Gln Ile Glu Gly Thr Gly Ile Ser Ser His Leu
1185   1190   1195   1200

Lys Ala Leu Ser Asp Lys Gln Ser Leu Pro Leu Arg Val Val Cys Gln
        1205   1210   1215

Pro Ala Gly Leu Pro Asp Lys Met Thr Ile Glu Met Tyr Pro Ser Asp
       1220   1225   1230

Gln Val Ala Asp Leu Arg Ala Glu Val Thr His Trp Tyr Glu Asn Leu
      1235   1240   1245

Gln Lys Glu Gln Ile Asn Gln Gln Ala Gln Leu Gln Glu Phe Gly Gln
  · 1250   1255   1260

Ser Asn Arg Lys Gly Glu Phe Pro Gly Gly Leu Met Gly Pro Val Arg
1265   1270   1275   1280

Met Ile Ser Ser Gly His Glu Leu Thr Thr Asp Tyr Asp Glu Lys Ala
       1285   1290   1295

Leu His Glu Leu Gly Phe Lys Asp Met Gln Met Val Phe Val Ser Leu
      1300   1305   1310

Gly Ala Pro Arg Arg Glu Arg Lys Gly Glu Gly Val Gln Leu Pro Ala
     1315   1320   1325

Ser Cys Leu Pro Pro Pro Gln Lys Asp Asn Ile Pro Met Leu Leu Leu
    1330   1335   1340

Leu Gln Glu Pro His Leu Thr Thr Leu Phe Asp Leu Leu Glu Met Leu
1345   1350   1355   1360

Ala Ser Phe Lys Pro Pro Ser Gly Lys Val Ala Val Asp Asp Ser Glu
         1365   1370   1375

Ser Leu Arg Cys Glu Glu Leu His Leu His Ala Glu Asn Leu Ser Arg
      1380   1385   1390

Arg Val Trp Glu Leu Leu Met Leu Leu Pro Thr Cys Pro Asn Met Leu
      1395   1400   1405

Met Ala Phe Gln Asn Ile Ser Asp Glu Gln Ser Phe Lys Ala Gln Ser
   1410   1415   1420

Asp His Arg Ser Arg His Glu Val Ser His Tyr Ser Met Trp Leu Leu
1425   1430   1435   1440

Val Ser Trp Ala His Cys Cys Ser Leu Val Lys Ser Ser Leu Ala Asp
         1445   1450   1455

Ser Asp His Leu Gln Asp Trp Leu Lys Lys Leu Thr Leu Leu Ile Pro
         1460   1465   1470

Glu Thr Ala Val Arg His Glu Ser Cys Ser Gly Leu Tyr Lys Leu Ser
      1475   1480   1485

Leu Ser Gly Leu Asp Gly Gly Asp Ser Ile Asn Arg Ser Phe Leu Leu
   1490   1495   1500

Leu Ala Ala Ser Thr Leu Leu Lys Phe Leu Pro Asp Ala Gln Ala Leu
1505   1510   1515   1520

Lys Pro Ile Arg Ile Asp Asp Tyr Glu Glu Glu Pro Ile Leu Lys Pro
         1525   1530   1535

Gly Cys Lys Glu Tyr Phe Trp Leu Leu Cys Lys Leu Val Asp Asn Ile
         1540   1545   1550

His Ile Lys Asp Ala Ser Gln Thr Thr Leu Leu Asp Leu Asp Ala Leu
      1555   1560   1565

Ala Arg His Leu Ala Asp Cys Ile Arg Ser Arg Glu Ile Leu Asp His
   1570   1575   1580

Gln Asp Gly Asn Val Glu Asp Asp Gly Leu Thr Gly Leu Leu Arg Leu
1585   1590   1595   1600

Ala Thr Ser Val Val Lys His Lys Pro Pro Phe Lys Phe Ser Arg Glu
         1605   1610   1615

Gly Gln Glu Phe Leu Arg Asp Ile Phe Asn Leu Leu Phe Leu Leu Pro
      1620   1625   1630

Ser Leu Lys Asp Arg Gln Gln Pro Lys Cys Lys Ser His Ser Ser Arg
   1635   1640   1645

Ala Ala Ala Tyr Asp Leu Leu Val Glu Met Val Lys Gly Ser Val Glu
   1650   1655   1660

Asn Tyr Arg Leu Ile His Asn Trp Val Met Ala Gln His Met Gln Ser
1665   1670   1675   1680

His Ala Pro Tyr Lys Trp Asp Tyr Trp Pro His Glu Asp Val Arg Ala
        1685   1690   1695

Glu Cys Arg Phe Val Gly Leu Thr Asn Leu Gly Ala Thr Cys Tyr Leu
     1700   1705   1710

Ala Ser Thr Ile Gln Gln Leu Tyr Met Ile Pro Glu Ala Arg Gln Ala
    1715   1720   1725

Val Phe Thr Ala Lys Tyr Ser Glu Asp Met Lys His Lys Thr Thr Leu
   1730   1735   1740

Leu Glu Leu Gln Lys Met Phe Thr Tyr Leu Met Glu Ser Glu Cys Lys
1745   1750   1755   1760

Ala Tyr Asn Pro Arg Pro Phe Cys Lys Thr Tyr Thr Met Asp Lys Gln
       1765   1770   1775

Pro Leu Asn Thr Gly Glu Gln Lys Asp Met Thr Glu Phe Phe Thr Asp
     1780   1785   1790

Leu Ile Thr Lys Ile Glu Glu Met Ser Pro Glu Leu Lys Asn Thr Val
    1795   1800   1805

Lys Ser Leu Phe Gly Gly Val Ile Thr Asn Asn Val Val Ser Leu Asp
   1810   1815   1820

Cys Glu His Val Ser Gln Thr Ala Glu Glu Phe Tyr Thr Val Arg Cys
1825   1830   1835   1840

Gln Val Ala Asp Met Lys Asn Ile Tyr Glu Ser Leu Asp Glu Val Thr
       1845   1850   1855

Ile Lys Asp Thr Leu Glu Gly Asp Asn Met Tyr Thr Cys Ser Gln Cys
    1860   1865   1870

Gly Lys Lys Val Arg Ala Glu Lys Arg Ala Cys Phe Lys Lys Leu Pro
   1875   1880   1885

Arg Ile Xaa Ser Phe Asn Thr Met Arg Tyr Thr Phe Asn Met Val Thr
   1890   1895   1900

Met Met Lys Glu Lys Val Asn Thr His Phe Ser Phe Pro Leu Arg Leu
1905   1910   1915   1920

Asp Met Thr Pro Tyr Thr Glu Asp Phe Leu Met Gly Lys Ser Glu Arg
       1925   1930   1935

Lys Glu Gly Phe Lys Glu Val Ser Asp His Ser Lys Asp Ser Glu Ser
     1940   1945   1950

Tyr Glu Tyr Asp Leu Ile Gly Val Thr Val His Thr Gly Thr Ala Asp
      1955   1960   1965

Gly Gly His Tyr Tyr Ser Phe Ile Arg Asp Ile Val Asn Pro His Ala
    1970   1975   1980

Tyr Lys Asn Asn Lys Trp Tyr Leu Phe Asn Asp Ala Glu Val Lys Pro
1985   1990   1995   2000

Phe Asp Ser Ala Gln Leu Ala Ser Glu Cys Phe Gly Gly Glu Met Thr
        2005   2010   2015

Thr Lys Thr Tyr Asp Ser Val Thr Asp Lys Phe Met Asp Phe Ser Phe
      2020   2025   2030

Glu Lys Thr His Ser Ala Tyr Met Leu Phe Tyr Lys Arg Met Glu Pro
    2035   2040   2045

Glu Glu Glu Asn Gly Arg Glu Tyr Lys Phe Asp Val Ser Ser Glu Leu
   2050   2055   2060

Leu Glu Trp Ile Trp His Asp Asn Met Gln Phe Leu Gln Asp Lys Asn
2065   2070   2075   2080

Ile Phe Glu His Thr Tyr Phe Gly Phe Met Trp Gln Leu Cys Ser Cys
      2085   2090   2095

Ile Pro Ser Thr Leu Pro Asp Pro Lys Ala Val Ser Leu Met Thr Ala
      2100   2105   2110

Lys Leu Ser Thr Ser Phe Val Leu Glu Thr Phe Ile His Ser Lys Glu
      2115   2120   2125

Lys Pro Thr Met Leu Gln Trp Ile Glu Leu Leu Thr Lys Gln Phe Asn
   2130   2135   2140

Asn Ser Gln Ala Ala Cys Glu Trp Phe Leu Asp Arg Met Ala Asp Asp
2145   2150   2155   2160

Asp Trp Trp Pro Met Gln Ile Leu Ile Lys Cys Pro Asn Gln Ile Val
      2165   2170   2175

Arg Gln Met Phe Gln Arg Leu Cys Ile His Val Ile Gln Arg Leu Arg
      2180   2185   2190

Pro Val His Ala His Leu Tyr Leu Gln Pro Gly Met Glu Asp Gly Ser
      2195   2200   2205

Asp Asp Met Asp Thr Ser Val Glu Asp Ile Gly Gly Arg Ser Cys Val
   2210   2215   2220

Thr Arg Phe Val Arg Thr Leu Leu Leu Ile Met Glu His Gly Val Lys
2225   2230   2235   2240

Pro His Ser Lys His Leu Thr Glu Tyr Phe Ala Phe Leu Tyr Glu Phe
      2245   2250   2255

Ala Lys Met Gly Glu Glu Glu Ser Gln Phe Leu Leu Ser Leu Gln Ala
      2260   2265   2270

Ile Ser Thr Met Val His Phe Tyr Met Gly Thr Lys Gly Pro Glu Asn
    2275   2280   2285

Pro Gln Val Glu Val Leu Ser Glu Glu Glu Gly Gly Glu Glu Glu Glu
 2290   2295   2300

Glu Glu Asp Ile Leu Ser Leu Ala Glu Glu Lys Tyr Arg Pro Ala Ala
2305   2310   2315   2320

Leu Glu Lys Met Ile Ala Leu Val Ala Leu Leu Val Glu Gln Ser Arg
      2325   2330   2335

Ser Glu Arg His Leu Thr Leu Ser Gln Thr Asp Met Ala Ala Leu Thr
    2340   2345   2350

Gly Gly Lys Gly Phe Pro Phe Leu Phe Gln His Ile Arg Asp Gly Ile
   2355   2360   2365

Asn Ile Arg Gln Thr Cys Asn Leu Ile Phe Ser Leu Cys Arg Tyr Asn
 2370   2375   2380

Asn Arg Leu Ala Glu His Ile Val Ser Met Leu Phe Thr Ser Ile Ala
2385   2390   2395   2400

Lys Leu Thr Pro Glu Ala Ala Asn Pro Phe Phe Lys Leu Leu Thr Met
      2405   2410   2415

Leu Met Glu Phe Ala Gly Gly Pro Pro Gly Met Pro Pro Phe Ala Ser
      2420   2425   2430

Tyr Ile Leu Gln Arg Ile Trp Glu Val Ile Glu Tyr Asn Pro Ser Gln
     2435   2440   2445

Cys Leu Asp Trp Leu Ala Val Gln Thr Pro Arg Asn Lys Leu Ala His
  2450   2455   2460

Ser Trp Val Leu Gln Asn Met Glu Asn Trp Val Glu Arg Phe Leu Leu
2465   2470   2475   2480

Ala His Asn Tyr Pro Arg Val Arg Thr Ser Ala Ala Tyr Leu Leu Val
      2485   2490   2495

Ser Leu Ile Pro Ser Asn Ser Phe Arg Gln Met Phe Arg Ser Thr Arg
     2500   2505   2510

Ser Leu His Ile Pro Thr Arg Asp Leu Pro Leu Ser Pro Asp Thr Thr
    2515   2520   2525

Val Val Leu His Gln Val Tyr Asn Val Leu Leu Gly Leu Leu Ser Arg
  2530   2535   2540

Ala Lys Leu Tyr Val Asp Ala Ala Val His Gly Thr Thr Lys Leu Val
2545   2550   2555   2560

Pro Tyr Phe Ser Phe Met Thr Tyr Cys Leu Ile Ser Lys Thr Glu Lys
      2565   2570   2575

Leu Met Phe Ser Thr Tyr Phe Met Asp Leu Trp Asn Leu Phe Gln Pro
      2580   2585   2590

Lys Leu Ser Glu Pro Ala Ile Ala Thr Asn His Asn Lys Gln Ala Leu
    2595   2600   2605

Leu Ser Phe Trp Tyr Asn Val Cys Ala Asp Cys Pro Glu Asn Ile Arg
  2610   2615   2620

Leu Ile Val Gln Asn Pro Val Val Thr Lys Asn Ile Ala Phe Asn Tyr
2625   2630   2635   2640

Ile Leu Ala Asp His Asp Asp Gln Asp Val Val Leu Phe Asn Arg Gly
      2645   2650   2655

Met Leu Pro Ala Tyr Tyr Gly Ile Leu Arg Leu Cys Cys Glu Gln Ser
      2660   2665   2670

Pro Ala Phe Thr Arg Gln Leu Ala Ser His Gln Asn Ile Gln Trp Ala
      2675   2680   2685

Phe Lys Asn Leu Thr Pro His Ala Ser Gln Tyr Pro Gly Ala Val Glu
    2690   2695   2700

Glu Leu Phe Asn Leu Met Gln Leu Phe Ile Ala Gln Arg Pro Asp Met
2705   2710   2715   2720

Arg Glu Glu Glu Leu Glu Asp Ile Lys Gln Phe Lys Lys Thr Thr Ile
      2725   2730   ·2735

Ser Cys Tyr Leu Arg Cys Leu Asp Gly Arg Ser Cys Trp Thr Thr Leu
      2740   2745   2750

Ile Ser Ala Phe Arg Ile Leu Leu Glu Ser Asp Glu Asp Arg Leu Leu
      2755   2760   2765

Val Val Phe Asn Arg Gly Leu Ile Leu Met Thr Glu Ser Phe Asn Thr
 · 2770   2775   2780

Leu His Met Met Tyr His Glu Ala Thr Ala Cys His Val Thr Gly Asp
2785   2790   2795   2800

Leu Val Glu Leu Leu Ser Ile Phe Leu Ser Val Leu Lys Ser Thr Arg
      2805   2810   2815

Pro Tyr Leu Gln Arg Lys Asp Val Lys Gln Ala Leu Ile Gln Trp Gln
      2820   2825   2830

Glu Arg Ile Glu Phe Ala His Lys Leu Leu Thr Leu Leu Asn Ser Tyr
      2835   2840   2845

Ser Pro Pro Glu Leu Arg Asn Ala Cys Ile Asp Val Leu Lys Glu Leu
  2850   2855   2860

Val Leu Leu Ser Pro His Asp Phe Leu His Thr Leu Val Pro Phe Leu
2865   2870   2875   2880

Gln His Asn His Cys Thr Tyr His His Ser Asn Ile Pro Met Ser Leu
          2885   2890   2895

Gly Pro Tyr Phe Pro Cys Arg Glu Asn Ile Lys Leu Ile Gly Gly Lys
     2900   2905   2910

Ser Asn Ile Arg Pro Pro Arg Pro Glu Leu Asn Met Cys Leu Leu Pro
     2915   2920   2925

Thr Met Val Glu Thr Ser Lys Gly Lys Asp Asp Val Tyr Asp Arg Met
     2930   2935   2940

Leu Leu Asp Tyr Phe Phe Ser Tyr His Gln Phe Ile His Leu Leu Cys
2945   2950   2955   2960

Arg Val Ala Ile Asn Cys Glu Lys Phe Thr Glu Thr Leu Val Lys Leu
          2965   2970   2975

Ser Val Leu Val Ala Tyr Glu Gly Leu Pro Leu His Leu Ala Leu Phe
          2980   2985   2990

Pro Lys Leu Trp Thr Glu Leu Cys Gln Thr Gln Ser Ala Met Ser Lys
     2995   3000   3005

Asn Cys Ile Lys Leu Leu Cys Glu Asp Pro Val Phe Ala Glu Tyr Ile
     3010   3015   3020

Lys Cys Ile Leu Met Asp Glu Arg Thr Phe Leu Asn Asn Asn Ile Val
3025   3030   3035   3040

Tyr Thr Phe Met Thr His Phe Leu Leu Lys Val Gln Ser Gln Val Phe
          3045   3050   3055

Ser Glu Ala Asn Cys Ala Asn Leu Ile Ser Thr Leu Ile Thr Asn Leu
          3060   3065   3070

Ile Ser Gln Tyr Gln Asn Leu Gln Ser Asp Phe Ser Asn Arg Val Glu
     3075   3080   3085

Ile Ser Lys Ala Ser Ala Ser Leu Asn Gly Asp Leu Arg Ala Leu Ala
     3090   3095   3100

Leu Leu Leu Ser Val His Thr Pro Lys Gln Leu Asn Pro Ala Leu Ile
3105   3110   3115   3120

Pro Thr Leu Gln Glu Leu Leu Ser Lys Cys Arg Thr Cys Leu Gln Gln
          3125   3130   3135

Arg Asn Ser Leu Gln Glu Gln Glu Ala Lys Glu Arg Lys Thr Lys Asp
          3140   3145   3150

Asp Glu Gly Ala Thr Pro Ile Lys Arg Arg Arg Val Ser Ser Asp Glu
     3155   3160   3165

Glu His Thr Val Asp Ser Cys Ile Ser Asp Met Lys Thr Glu Thr Arg
   3170   3175   3180

Glu Val Leu Thr Pro Thr Ser Thr Ser Asp Asn Glu Thr Arg Asp Ser
3185   3190   3195   3200

Ser Ile Ile Asp Pro Gly Thr Glu Gln Asp Leu Pro Ser Pro Glu Asn
          3205   3210   3215

Ser Ser Val Lys Glu Tyr Arg Met Glu Val Pro Ser Ser Phe Ser Glu
          3220   3225   3230

Asp Met Ser Asn Ile Arg Ser Gln His Ala Glu Glu Gln Ser Asn Asn
          3235   3240   3245

Gly Arg Tyr Asp Asp Cys Lys Glu Phe Lys Asp Leu His Cys Ser Lys
   3250   3255   .   3260

Asp Ser Thr Leu Ala Glu Glu Glu Ser Glu Phe Pro Ser Thr Ser Ile
3265   3270   3275   3280

Ser Ala Val Leu Ser Asp Leu Ala Asp Leu Arg Ser Cys Asp Gly Gln
          3285   3290   3295

Ala Leu Pro Ser Gln Asp Pro Glu Val Ala Leu Ser Leu Ser Cys Gly
          3300   3305   3310

His Ser Arg Gly Leu Phe Ser His Met Gln Gln His Asp Ile Leu Asp
          3315   3320   3325

Thr Leu Cys Arg Thr Ile Glu Ser Thr Ile His Val Val Thr Arg Ile
   3330   3335   3340

Ser Gly Lys Gly Asn Gln Ala Ala Ser
3345   3350

<210> 65
<211> 980
<212> PRT
<213> Homo sapiens

<400> 65
Met Ser Pro Leu Lys Ile His Gly Pro Ile Arg Ile Arg Ser Met Gln
   1   5   10   15

Thr Gly Ile Thr Lys Trp Lys Glu Gly Ser Phe Glu Ile Val Glu Lys
             20   25   30

Glu Asn Lys Val Ser Leu Val Val His Tyr Asn Thr Gly Gly Ile Pro
          35   40   45

Arg Ile Phe Gln Leu Ser His Asn Ile Lys Asn Val Val Leu Arg Pro
   50   55   60

Ser Gly Ala Lys Gln Ser Arg Leu Met Leu Thr Leu Gln Asp Asn Ser
   65   70   75   80

Phe Leu Ser Ile Asp Lys Val Pro Ser Lys Asp Ala Glu Glu Met Arg
                85   90   95

Leu Phe Leu Asp Ala Val His Gln Asn Arg Leu Pro Ala Ala Met Lys
               100   105   110

Pro Ser Gln Gly Ser Gly Ser Phe Gly Ala Ile Leu Gly Ser Arg Thr
               115   120   125

Ser Gln Lys Glu Thr Ser Arg Gln Leu Ser Tyr Ser Asp Asn Gln Ala
     130   135   140

Ser Ala Lys Arg Gly Ser Leu Glu Thr Lys Asp Asp Ile Pro Phe Arg
145   150   155   160

Lys Val Leu Gly Asn Pro Gly Arg Gly Ser Ile Lys Thr Val Ala Gly
               165   170   175

Ser Gly Ile Ala Arg Thr Ile Pro Ser Leu Thr Ser Thr Ser Thr Pro
               180   185   190

Leu Arg Ser Gly Leu Leu Glu Asn Arg Thr Glu Lys Arg Lys Arg Met
     195   200   205

Ile Ser Thr Gly Ser Glu Leu Asn Glu Asp Tyr Pro Lys Glu Asn Asp
     210   215   220

Ser Ser Ser Asn Asn Lys Ala Met Thr Asp Pro Ser Arg Lys Tyr Leu
225   230   235   240

Thr Ser Ser Arg Glu Lys Gln Leu Ser Leu Lys Gln Ser Glu Glu Asn
               245   250   255

Arg Thr Ser Gly Gly Leu Leu Pro Leu Gln Ser Ser Ser Phe Tyr Gly
               260   265   270

Ser Arg Ala Gly Ser Lys Glu His Ser Ser Gly Gly Thr Asn Leu Asp
     275   280   285

Arg Thr Asn Val Ser Ser Gln Thr Pro Ser Ala Lys Arg Ser Leu Gly
     290   295   300

Phe Leu Pro Gln Pro Val Pro Leu Ser Val Lys Lys Leu Arg Cys Asn
305   310   315   320

Gln Asp Tyr Thr Gly Trp Asn Lys Pro Arg Val Pro Leu Ser Ser His
               325   330   335

Gln Gln Gln Gln Leu Gln Gly Phe Ser Asn Leu Gly Asn Thr Cys Tyr
               340   345   350

Met Asn Ala Ile Leu Gln Ser Leu Phe Ser Leu Gln Ser Phe Ala Asn
     355   360   365

Asp Leu Leu Lys Gln Gly Ile Pro Trp Lys Lys Ile Pro Leu Asn Ala
     370   375   380

```
Leu Ile Arg Arg Phe Ala His Leu Leu Val Lys Lys Asp Ile Cys Asn
385             390             395             400

Ser Glu Thr Lys Lys Asp Leu Leu Lys Lys Val Lys Asn Ala Ile Ser
                405             410             415

Ala Thr Ala Glu Arg Phe Ser Gly Tyr Met Gln Asn Asp Ala His Glu
            420             425             430

Phe Leu Ser Gln Cys Leu Asp Gln Leu Lys Glu Asp Met Glu Lys Leu
            435             440             445

Asn Lys Thr Trp Lys Thr Glu Pro Val Ser Gly Glu Glu Asn Ser Pro
    450             455             460

Asp Ile Ser Ala Thr Arg Ala Tyr Thr Cys Pro Val Ile Thr Asn Leu
465             470             475             480

Glu Phe Glu Val Gln His Ser Ile Ile Cys Lys Ala Cys Gly Glu Ile
            485             490             495

Ile Pro Lys Arg Glu Gln Phe Asn Asp Leu Ser Ile Asp Leu Pro Arg
            500             505             510

Arg Lys Lys Pro Leu Pro Pro Arg Ser Ile Gln Asp Ser Leu Asp Leu
        515             520             525

Phe Phe Arg Ala Glu Glu Leu Glu Tyr Ser Cys Glu Lys Cys Gly Gly
    530             535             540

Lys Cys Ala Leu Val Arg His Lys Phe Asn Arg Leu Pro Arg Val Leu
545             550             555             560

Ile Leu His Leu Lys Arg Tyr Ser Phe Asn Val Ala Leu Ser Leu Asn
            565             570             575

Asn Lys Ile Gly Gln Gln Val Ile Ile Pro Arg Tyr Leu Thr Leu Ser
            580             585             590

Ser His Cys Thr Glu Asn Thr Lys Pro Pro Phe Thr Leu Gly Trp Ser
        595             600             605

Ala His Met Ala Met Ser Arg Pro Leu Lys Ala Ser Gln Met Val Asn
    610             615             620

Ser Cys Ile Thr Ser Pro Ser Thr Pro Ser Lys Lys Phe Thr Phe Lys
625             630             635             640

Ser Lys Ser Ser Leu Ala Leu Cys Leu Asp Ser Asp Ser Glu Asp Glu
            645             650             655

Leu Lys Arg Ser Val Ala Leu Ser Gln Arg Leu Cys Glu Met Leu Gly
            660             665             670

Asn Glu Gln Gln Gln Glu Asp Leu Glu Lys Asp Ser Lys Leu Cys Pro
    675             680             685
```

```
Ile Glu Pro Asp Lys Ser Glu Leu Glu Asn Ser Gly Phe Asp Arg Met
    690         695             700
```

```
Ser Glu Glu Glu Leu Leu Ala Ala Val Leu Glu Ile Ser Lys Arg Asp
705             710             715                 720
```

```
Ala Ser Pro Ser Leu Ser His Glu Asp Asp Asp Lys Pro Thr Ser Ser
            725             730             735
```

```
Pro Asp Thr Gly Phe Ala Glu Asp Asp Ile Gln Glu Met Pro Glu Asn
        740             745             750
```

```
Pro Asp Thr Met Glu Thr Glu Lys Pro Lys Thr Ile Thr Glu Leu Asp
        755             760             765
```

```
Pro Ala Ser Phe Thr Glu Ile Thr Lys Asp Cys Asp Glu Asn Lys Glu
    770             775             780
```

```
Asn Lys Thr Pro Glu Gly Ser Gln Gly Glu Val Asp Trp Leu Gln Gln
785             790             795                 800
```

```
Tyr Asp Met Glu Arg Glu Arg Glu Glu Gln Glu Leu Gln Gln Ala Leu
            805             810             815
```

```
Ala Gln Ser Leu Gln Glu Gln Glu Ala Trp Glu Gln Lys Glu Asp Asp
        820             825             830
```

```
Asp Leu Lys Arg Ala Thr Glu Leu Ser Leu Gln Glu Phe Asn Asn Ser
        835             840             845
```

```
Phe Val Asp Ala Leu Gly Ser Asp Glu Asp Ser Gly Asn Glu Asp Val
    850             855             860
```

```
Phe Asp Met Glu Tyr Thr Glu Ala Glu Ala Glu Glu Leu Lys Arg Asn
865             870             875                 880
```

```
Ala Glu Thr Gly Asn Leu Pro His Ser Tyr Arg Leu Ile Ser Val Val
            885             890             895
```

```
Ser His Ile Gly Ser Thr Ser Ser Ser Gly His Tyr Ile Ser Asp Val
            900             905             910
```

```
Tyr Asp Ile Lys Lys Gln Ala Trp Phe Thr Tyr Asn Asp Leu Glu Val
        915             920             925
```

```
Ser Lys Ile Gln Glu Ala Ala Val Gln Ser Asp Arg Asp Arg Ser Gly
        930             935             940
```

```
Tyr Ile Phe Phe Tyr Met His Lys Glu Ile Phe Asp Glu Leu Leu Glu
945             950             955                 960
```

```
Thr Glu Lys Asn Ser Gln Ser Leu Ser Thr Glu Val Gly Lys Thr Thr
                965             970             975
```

```
Arg Gln Ala Ser
        980
```

<210> 66
<211> 953
<212> PRT
<213> Homo sapiens

<400> 66

```
Met Thr Leu Leu Ala Pro Trp Tyr Thr Gly Pro Met Ile Pro Met Asp
 1               5                  10                  15

Val Asn Glu Pro Ser Ser Val Thr Thr Ala Pro Thr Leu Ser Ser Ser
                20                  25                  30

Leu Gln His Ile Ser Ser Phe Leu Ala Thr Gly Lys Lys Leu Ser Leu
            35                  40                  45

His Phe Gly His Pro Arg Glu Cys Glu Val Thr Arg Ile Asp Asp Lys
        50                  55                  60

Asn Arg Arg Gly Leu Glu Asp Ser Glu Pro Gly Ala Lys Leu Phe Asn
65                  70                  75                  80

Asn Asp Gly Val Cys Cys Cys Leu Gln Lys Arg Gly Pro Val Asn Ile
                85                  90                  95

Thr Ser Val Cys Val Ser Pro Arg Thr Leu Gln Ile Ser Val Phe Val
            100                 105                 110

Leu Ser Glu Lys Tyr Glu Gly Ile Val Lys Phe Glu Ser Asp Glu Leu
        115                 120                 125

Pro Phe Gly Val Ile Gly Ser Asn Ile Gly Asp Ala His Phe Gln Glu
    130                 135                 140

Phe Arg Ala Gly Ile Ser Trp Lys Pro Val Val Asp Pro Asp Asp Pro
145                 150                 155                 160

Ile Pro Gln Phe Pro Asp Cys Cys Ser Ser Ser Ser Ser Arg Ile Pro
                165                 170                 175

Ser Val Ser Val Leu Val Ala Val Pro Leu Val Ala Gly His Lys Gly
            180                 185                 190

Gln Ala Phe Ile Glu Arg Met Leu Gly Cys Phe Lys Glu Leu Lys Gln
        195                 200                 205

Glu Leu Thr Gln Glu Gly Pro Gly Gly Gly His Pro Arg Ser Ala Trp
    210                 215                 220

Pro Pro Arg Arg His Ala Gln Trp Pro Pro Glu Pro Cys Glu Gln Gly
225                 230                 235                 240

Glu Glu Pro Pro Pro Val Glu Ala Glu Glu Val Glu Glu Ala Glu Thr
                245                 250                 255

Ala Glu Lys Ala Glu Arg Lys Val Glu Ala Glu Ala Lys Val Glu Gly
            260                 265                 270
```

Lys Ala Glu Ala Ala Gly Lys Ala Glu Ala Ala Gly Lys Val Asp Ala
        275   280   285

Thr Glu Lys Val Glu Thr Ala Gly Lys Val Asp Ala Ala Gly Lys Val
    290   295   300

Glu Thr Ala Glu Gly Pro Gly Arg Arg Ala Glu Leu Lys Leu Glu Pro
305   310   315   320

Glu Pro Glu Pro Val Arg Glu Ala Glu Gln Glu Pro Lys Gln Glu Leu
                325   330   335

Glu Asp Glu Asn Pro Ala Arg Ser Gly Gly Gly Asn Ser Asp Glu
            340   345   350

Val Pro Pro Pro Thr Leu Pro Ser Asp Pro Pro Arg Pro Pro Asp Pro
    355   360 ·   365

Ser Pro Arg Arg Ser Arg Ala Pro Arg Arg Arg Pro Arg Pro Arg Pro
    370   375   380

Gln Thr Arg Leu Arg Thr Pro Pro Gln Pro Arg Pro Arg Pro Pro Pro
385   390   395   400

Arg Pro Arg Pro Arg Arg Gly Pro Gly Gly Gly Cys Leu Asp Val Asp
            405   410   415

Phe Ala Val Gly Pro Pro Gly Cys Ser His Val Asn Ser Phe Lys Val
            420   425   430

Gly Glu Asn Trp Arg Gln Glu Leu Arg Val Ile Tyr Gln Cys Phe Val
            435   440   445

Trp Cys Gly Thr Pro Glu Thr Arg Lys Ser Lys Ala Lys Ser Cys Ile
    450   455   460

Cys His Val Cys Gly Thr His Leu Asn Arg Leu His Ser Cys Leu Ser
465   470   475   480

Cys Val Phe Phe Gly Cys Phe Thr Glu Lys His Ile His Glu His Ala
            485   490   495

Glu Thr Lys Gln His Asn Leu Ala Val Asp Leu Tyr Tyr Gly Gly Ile
        500   505   510

Tyr Cys Phe Met Cys Lys Asp Tyr Val Tyr Asp Lys Asp Ile Glu Gln
        515   520   525

Ile Ala Lys Glu Glu Gln Gly Glu Ala Leu Lys Leu Gln Ala Ser Thr
    530   535   540

Ser Thr Glu Val Ser His Gln Gln Cys Ser Val Pro Gly Leu Gly Glu
545   550   555   560

Lys Phe Pro Thr Trp Glu Thr Thr Lys Pro Glu Leu Glu Leu Leu Gly
            565   570   575

His Asn Pro Arg Arg Arg Arg Ile Thr Ser Ser Phe Thr Ile Gly Leu
      580   585   590

Arg Gly Leu Ile Asn Leu Gly Asn Thr Cys Phe Met Asn Cys Ile Val
      595   600   605

Gln Ala Leu Thr His Thr Pro Ile Leu Arg Asp Phe Phe Leu Ser Asp
      610   615   620

Arg His Arg Cys Glu Met Pro Ser Pro Glu Leu Cys Leu Val Cys Glu
625   630   635   640

Met Ser Ser Leu Phe Arg Glu Leu Tyr Ser Gly Asn Pro Ser Pro His
         645   650   655

Val Pro Tyr Lys Leu Leu His Leu Val Trp Ile His Ala Arg His Leu
      660   665   670

Ala Gly Tyr Arg Gln Gln Asp Ala His Glu Phe Leu Ile Ala Ala Leu
      675   680   685

Asp Val Leu His Arg His Cys Lys Gly Asp Asp Val Gly Lys Ala Ala
      690   695   700

Asn Asn Pro Asn His Cys Asn Cys Ile Ile Asp Gln Ile Phe Thr Gly
705   710   715   720

Gly Leu Gln Ser Asp Val Thr Cys Gln Ala Cys His Gly Val Ser Thr
         725   730   735

Thr Ile Asp Pro Cys Trp Asp Ile Ser Leu Asp Leu Pro Gly Ser Cys
         740   745   750

Thr Ser Phe Trp Pro Met Ser Pro Gly Arg Glu Ser Ser Val Asn Gly
         755   760   765

Glu Ser His Ile Pro Gly Ile Thr Thr Leu Thr Asp Cys Leu Arg Arg
      770   775   780

Phe Thr Arg Pro Glu His Leu Gly Ser Ser Ala Lys Ile Lys Cys Gly
785   790   795   800

Ser Cys Gln Ser Tyr Gln Glu Ser Thr Lys Gln Leu Thr Met Asn Lys
         805   810   815

Leu Pro Val Val Ala Cys Phe His Phe Lys Arg Phe Glu His Ser Ala
         820   825   830

Lys Gln Arg Arg Lys Ile Thr Thr Tyr Ile Ser Phe Pro Leu Glu Leu
      835   840   845

Asp Met Thr Pro Phe Met Ala Ser Ser Lys Glu Ser Arg Met Asn Gly
      850   855   860

Gln Leu Gln Leu Pro Thr Asn Ser Gly Asn Asn Glu Asn Lys Tyr Ser
865   870   875   880

Leu Phe Ala Val Val Asn His Gln Gly Thr Leu Glu Ser Gly His Tyr
                    885   890   895

Thr Ser Phe Ile Arg His His Lys Asp Gln Trp Phe Lys Cys Asp Asp
            900   905   910

Ala Val Ile Thr Lys Ala Ser Ile Lys Asp Val Leu Asp Ser Glu Gly
            915   920   925

Tyr Leu Leu Phe Tyr His Lys Gln Val Leu Glu His Glu Ser Glu Lys
    930   935   940

Val Lys Glu Met Asn Thr Gln Ala Tyr
945   950

<210> 67
<211> 783
<212> PRT
<213> Homo sapiens

<400> 67
Met Arg Val Lys Asp Pro Thr Lys Ala Leu Pro Glu Lys Ala Lys Arg
    1   5   10   15

Ser Lys Arg Pro Thr Val Pro His Asp Glu Asp Ser Ser Asp Asp Ile
            20   25   30

Ala Val Gly Leu Thr Cys Gln His Val Ser His Ala Ile Ser Val Asn
            35   40   45

His Val Lys Arg Ala Ile Ala Glu Asn Leu Trp Ser Val Cys Ser Glu
    50   55   60

Cys Leu Glu Glu Arg Arg Phe Tyr Asp Gly Gln Leu Val Leu Thr Ser
65   70   75   80

Asp Ile Trp Leu Cys Leu Lys Cys Gly Phe Gln Gly Cys Gly Lys Asn
            85   90   95

Ser Glu Ser Gln His Ser Leu Lys His Phe Lys Ser Ser Arg Thr Glu
            100   105   110

Pro His Cys Ile Ile Ile Asn Leu Ser Thr Trp Ile Ile Trp Cys Tyr
            115   120   125

Glu Cys Asp Glu Lys Leu Ser Thr His Cys Asn Lys Lys Val Leu Ala
    130   135   140

Gln Ile Val Asp Phe Leu Gln Lys His Ala Ser Lys Thr Gln Thr Ser
145   150   155   160

Ala Phe Ser Arg Ile Met Lys Leu Cys Glu Glu Lys Cys Glu Thr Asp
            165   170   175

Glu Ile Gln Lys Gly Gly Lys Cys Arg Asn Leu Ser Val Arg Gly Ile
            180   185   190

Thr Asn Leu Gly Asn Thr Cys Phe Phe Asn Ala Val Met Gln Asn Leu
     195   200   205

Ala Gln Thr Tyr Thr Leu Thr Asp Leu Met Asn Glu Ile Lys Glu Ser
     210   215   220

Ser Thr Lys Leu Lys Ile Phe Pro Ser Ser Asp Ser Gln Leu Asp Pro
225   230   235   240

Leu Val Val Glu Leu Ser Arg Pro Gly Pro Leu Thr Ser Ala Leu Phe
         245   250   255

Leu Phe Leu His Ser Met Lys Glu Thr Glu Lys Gly Pro Leu Ser Pro
         260   265   270

Lys Val Leu Phe Asn Gln Leu Cys Gln Lys Ala Pro Arg Phe Lys Asp
         275   280   285

Phe Gln Gln Gln Asp Ser Gln Glu Leu Leu His Tyr Leu Leu Asp Ala
     290   295   300

Val Arg Thr Glu Glu Thr Lys Arg Ile Gln Ala Ser Ile Leu Lys Ala
305   310   315   320

Phe Asn Asn Pro Thr Thr Lys Thr Ala Asp Asp Glu Thr Arg Lys Lys
         325   330   335

Val Lys Ile Ser Thr Val Lys Asp Pro Phe Ile Asp Ile Ser Leu Pro
         340   345   350

Ile Ile Glu Glu Arg Val Ser Lys Pro Leu Leu Trp Gly Arg Met Asn
         355   360   365

Lys Tyr Arg Ser Leu Arg Glu Thr Asp His Asp Arg Tyr Ser Gly Asn
     370   375   380

Val Thr Ile Glu Asn Ile His Gln Pro Arg Ala Ala Lys Lys His Ser
385   390   395   400

Ser Ser Lys Asp Lys Ser Gln Leu Ile His Asp Arg Lys Cys Ile Arg
         405   410   415

Lys Leu Ser Ser Gly Glu Thr Val Thr Tyr Gln Lys Asn Glu Asn Leu
         420   425   430

Glu Met Asn Gly Asp Ser Leu Met Phe Ala Ser Leu Met Asn Ser Glu
         435   440   445

Ser Arg Leu Asn Glu Ser Pro Thr Asp Asp Ser Glu Lys Glu Ala Ser
     450   455   460

His Ser Glu Ser Asn Val Asp Ala Asp Ser Glu Pro Ser Glu Ser Glu
465   470   475   480

Ser Ala Ser Lys Gln Thr Gly Leu Phe Arg Ser Ser Ser Gly Ser Gly
         485   490   495

```
Val Gln Pro Asp Gly Pro Leu Tyr Pro Leu Ser Ala Gly Lys Leu Leu
            500             505             510

Tyr Thr Lys Glu Thr Asp Ser Gly Asp Lys Glu Met Ala Glu Ala Ile
            515             520             525

Ser Glu Leu Arg Leu Ser Ser Thr Val Thr Gly Asp Gln Asp Phe Asp
        530             535             540

Arg Glu Asn Gln Pro Leu Asn Ile Ser Asn Asn Leu Cys Phe Leu Glu
545             550             555             560

Gly Lys His Leu Arg Ser Tyr Ser Pro Gln Asn Ala Phe Gln Thr Leu
                565             570             575

Ser Gln Ser Tyr Ile Thr Thr Ser Lys Glu Cys Ser Ile Gln Ser Cys
            580             585             590

Leu Tyr Gln Phe Thr Ser Met Glu Leu Leu Met Gly Asn Asn Lys Leu
            595             600             605

Leu Cys Glu Asn Cys Thr Lys Asn Lys Gln Lys Tyr Gln Glu Glu Thr
        610             615             620

Ser Phe Ala Glu Lys Lys Val Glu Gly Val Tyr Thr Asn Ala Arg Lys
625             630             635             640

Gln Leu Leu Ile Ser Ala Val Pro Ala Val Leu Ile Leu His Leu Lys
                645             650             655

Arg Phe His Gln Ala Gly Leu Ser Leu Arg Lys Val Asn Arg His Val
            660             665             670

Asp Phe Pro Leu Met Leu Asp Leu Ala Pro Phe Cys Ser Ala Thr Cys
            675             680             685

Lys Asn Ala Ser Val Gly Asp Lys Val Leu Tyr Gly Leu Tyr Gly Ile
        690             695             700

Val Glu His Ser Gly Ser Met Arg Glu Gly His Tyr Thr Ala Tyr Val
705             710             715             720

Lys Val Arg Thr Pro Ser Arg Lys Leu Ser Glu His Asn Thr Lys Lys
                725             730             735

Lys Asn Val Pro Gly Leu Lys Ala Ala Asp Ser Glu Ser Ala Gly Gln
            740             745             750

Trp Val His Val Ser Asp Thr Tyr Leu Gln Val Val Pro Glu Ser Arg
            755             760             765

Ala Leu Ser Ala Gln Ala Tyr Leu Leu Phe Tyr Glu Arg Val Leu
    770             775             780
```

<210> 68
<211> 753
<212> PRT

<213> Homo sapiens

<400> 68

```
Met Glu Tyr Pro Val Pro Tyr Phe Arg Ser Pro Asn Arg Thr Leu Ile
 1               5                  10                  15

Pro Glu Arg Ile Trp Ser Asn Pro Leu Leu Val Leu Val Ile Ala Tyr
            20                  25                  30

Lys Thr Val Ser Trp Pro Arg Gln Gln Leu Leu Ala Lys Gln Ala Asn
        35                  40                  45

Lys Trp Met Pro Phe Val Ile Pro Ser Lys Thr Leu Pro Trp Asp Pro
    50                  55                  60

Leu Glu Leu Lys Ile Cys Tyr Gln Gln Asn Arg Pro Tyr Pro Ser Pro
65                  70          .       75                  80

Asp Pro Ser Asn Phe Pro Thr Phe Leu Arg Cys Leu Asn Ala Phe Ser
                85                  90                  95

Ala Ala Val Phe Tyr Leu Pro Gln Pro Ser Trp His Lys Pro Glu Gly
            100     .           105                 110

Leu Lys Pro Ala Gly Tyr Pro Arg Val Pro Asp Ile Pro Tyr Gly Ser
        115                 120                 125

Gly Tyr Thr Leu Lys Ser Thr Thr Glu Ala Ala Gly Leu His Gln Ser
    130                 135                 140

Leu Pro Met Val Gln Leu Pro Leu His Pro Thr Lys Gly Ser Ala Leu
145                 150                 155                 160

Leu Lys Glu Ser Glu Leu Asn Asp Ala Asp Trp Ala Asn Leu Met Trp
                165                 170                 175

Lys Arg Tyr Leu Glu Glu Gln Glu Asp Ser Lys Met Val Asp Leu Phe
            180                 185                 190

Val Gly Gln Met Lys Ser Tyr Leu Lys Cys Gln Ala Cys Gly Tyr His
        195                 200                 205      .

Ser Met Thr Phe Lys Val Phe Phe Phe Cys Asp Leu Ser Leu Thr Ile
    210                 215                 220

Pro Lys Lys Gly Phe Ala Gly Gly Lys Val Ser Leu Arg Asp Cys Leu
225                 230                 235                 240

Ser Leu Phe Thr Lys Glu Glu Glu Leu Glu Leu Glu Asn Ala Ser Gly
                245                 250                 255

Thr Leu Pro Val Thr Lys Ser Glu Val Leu Ser Thr Ser Cys Val Pro
            260                 265                 270

Phe Gly Thr Thr Gln Ala Ala Ser Thr Val Ala Thr Thr Gln Pro Cys
        275                 280                 285
```

```
Ala Ser Ala Arg Leu Val Gly Thr Phe Thr Met Thr Leu Val Ser Pro
    290                 295                 300

Leu Asn Thr Leu Arg Asp Thr Glu Gly Ile Glu Leu Thr Val Met Lys
305                 310                 315                 320

Ala Leu Val Leu Asp Ile Leu Phe Lys Ala Ser Thr Asp Ile Ile Leu
            325                 330                 335

Phe Asn His Asp Ser Ser Ser Gly Asn Lys Trp Arg Lys Leu Pro Glu
            340                 345                 350

Pro Gly Gly Leu Glu Lys Lys His Glu Glu Leu Arg Leu Arg Pro Leu
        355                 360                 365

Lys Glu Glu Tyr His Trp Leu Val Leu Val Pro Leu Lys Leu Thr Gly
    370                 375                 380

Ser Pro His Arg Trp Arg Pro Arg Lys Arg Ala Leu Ala Ser Cys Ser
385                 390                 395                 400

Trp Cys Leu Gln Arg Val Thr Met Arg Arg Val Met Gly Val Gln Asp
            405                 410                 415

Lys Ala Gly Asn Arg Asn Gln Met Leu Leu Leu Gly Gln Arg Pro Val
            420                 425                 430

Ile Gly Asp Thr Val Ser Asn Ser Gln Thr Thr Arg Asp Lys Ala Cys
        435                 440                 445

Arg Arg Pro Pro Ser His Ser Val Phe Thr Gln Ser Ser Phe Trp Ala
    450                 455                 460

Cys Leu Asp Pro Asp Leu Phe Phe Tyr Gly His Gln Ser Tyr Trp Met
465                 470                 475                 480

Lys Ala His Leu Asn Asp Leu Ile Leu Arg Glu Gly Pro Val Thr Gln
            485                 490                 495

Met Ala Gln Ser Phe Tyr Trp Gly Phe Pro Ala Gly Gly Asn Leu Ser
        500                 505                 510

Ala Leu Glu Met Leu Pro Asp Gly Pro Ala Pro Arg Thr Phe Leu Gln
    515                 520                 525

Lys Lys Ser Cys Leu Phe Pro Leu Phe Ser Tyr Ile Leu Leu His Lys
    530                 535                 540

Ala Gly Lys Leu Phe Gln Pro Asp Ala His Gly Phe Leu Val Lys Lys
545                 550                 555                 560

Val His Ala Pro Thr Arg Gly Ile Val Phe Ile Met Glu Pro Arg Gln
            565                 570                 575

Leu Gly Gly Lys Gly Ser Leu Ser Lys Leu Gln Pro Ala Cys Ala Leu
        580                 585                 590
```

```
Gly Gly Met Asn Ser Gly Met Glu Pro Gln Lys Ser Ala Pro Phe Ala
        595             600         605
```

```
Ala Gly Lys Gly Leu Ala Pro Pro Leu Pro Val Cys Asn Leu Arg Phe
        610         615             620
```

```
Lys Leu Arg Val Tyr Lys Phe Glu Glu Glu Leu Trp Ser Arg Ala Gly
625             630             635             640
```

```
Leu Gly Lys Lys Ser Asp Asn His Ser Ser Arg Gln Met Pro Trp Gly
            645             650             655
```

```
Ala Ala Gly Val Ala Cys Gln His Pro Cys Lys Leu Pro Arg Ile Val
        660             665             670
```

```
Ala Glu Leu Thr Pro Pro Lys Leu Ser Phe Gly Phe Leu Asn Thr Val
        675         680             685
```

```
Gln Ser Ser Val Leu Pro Thr Ser Leu Ser Gln Phe Phe Leu Asn Asp
        690         695             700
```

```
Ser Gln Pro Glu Glu Ala Ile Pro Pro Gln Ser Leu Leu Pro Gly Ser
705             710             715             720
```

```
Pro Arg Thr Asn Ser Phe Pro Lys Asp Lys Phe Val Pro Lys Asp Lys
            725             730             735
```

```
Leu Lys Val Ile Leu Ser Leu Leu Thr Met Tyr Glu Leu Asp Arg Leu
            740             745             750
```

```
Phe
```


```
<210> 69
<211> 712
<212> PRT
<213> Homo sapiens

<400> 69
Met Leu Ala Met Asp Thr Cys Lys His Val Gly Gln Leu Gln Leu Ala
 1           5               10                  15
```

```
Gln Asp His Ser Ser Leu Asn Pro Gln Lys Trp His Cys Val Asp Cys
            20              25              30
```

```
Asn Thr Thr Glu Ser Ile Trp Ala Cys Leu Ser Cys Ser His Val Ala
        35              40              45
```

```
Cys Gly Arg Tyr Ile Glu Glu His Ala Leu Lys His Phe Gln Glu Ser
    50              55              60
```

```
Ser His Pro Val Ala Leu Glu Val Asn Glu Met Tyr Val Phe Cys Tyr
65              70              75              80
```

```
Leu Cys Asp Asp Tyr Val Leu Asn Asp Asn Ala Thr Gly Asp Leu Lys
            85              90              95
```

Leu Leu Arg Arg Thr Leu Ser Ala Ile Lys Ser Gln Asn Tyr His Cys
        100   105   110

Thr Thr Arg Ser Gly Arg Phe Leu Arg Ser Met Gly Thr Gly Asp Asp
        115   120   125

Ser Tyr Phe Leu His Asp Gly Ala Gln Ser Leu Leu Gln Ser Glu Asp
    130   135   140

Gln Leu Tyr Thr Ala Leu Trp His Arg Arg Arg Ile Leu Met Gly Lys
145   150   155   160

Ile Phe Arg Thr Trp Phe Glu Gln Ser Pro Ile Gly Arg Lys Lys Gln
            165   170   175

Glu Glu Pro Phe Gln Glu Lys Ile Val Val Lys Arg Glu Val Lys Lys
            180   185   190

Arg Arg Gln Glu Leu Glu Tyr Gln Val Lys Ala Glu Leu Glu Ser Met
        195   200   205

Pro Pro Arg Lys Ser Leu Arg Leu Gln Gly Leu Ala Gln Ser Thr Ile
    210   215   220

Ile Glu Ile Val Ser Val Gln Val Pro Ala Gln Thr Pro Ala Ser Pro
225   230   235   240

Ala Lys Asp Lys Val Leu Ser Thr Ser Glu Asn Glu Ile Ser Gln Lys
            245   250   255

Val Ser Asp Ser Ser Val Lys Arg Arg Pro Ile Val Thr Pro Gly Val
        260   265   270

Thr Gly Leu Arg Asn Leu Gly Asn Thr Cys Tyr Met Asn Ser Val Leu
    275   280   285

Gln Val Leu Ser His Leu Leu Ile Phe Arg Gln Cys Phe Leu Lys Leu
    290   295   300

Asp Leu Asn Gln Trp Leu Ala Met Thr Ala Ser Glu Lys Thr Arg Ser
305   310   315   320

Cys Lys His Pro Pro Val Thr Asp Thr Val Val Tyr Gln Met Asn Glu
            325   330   335

Cys Gln Glu Lys Asp Thr Gly Phe Val Cys Ser Arg Gln Ser Ser Leu
        340   345   350

Ser Ser Gly Leu Ser Gly Gly Ala Ser Lys Gly Arg Lys Met Glu Leu
        355   360   365

Ile Gln Pro Lys Glu Pro Thr Ser Gln Tyr Ile Ser Leu Cys His Glu
    370   375   380

Leu His Thr Leu Phe Gln Val Met Trp Ser Gly Lys Trp Ala Leu Val
385   390   395   400

```
Ser Pro Phe Ala Met Leu His Ser Val Trp Arg Leu Ile Pro Ala Phe
            405             410             415

Arg Gly Tyr Ala Gln Gln Asp Ala Gln Glu Phe Leu Cys Glu Leu Leu
            420             425             430

Asp Lys Ile Gln Arg Glu Leu Glu Thr Thr Gly Thr Ser Leu Pro Ala
            435             440             445

Leu Ile Pro Thr Ser Gln Arg Lys Leu Ile Lys Gln Val Leu Asn Val
    450             455             460

Val Asn Asn Ile Phe His Gly Gln Leu Leu Ser Gln Val Thr Cys Leu
465             470             475             480

Ala Cys Asp Asn Lys Ser Asn Thr Ile Glu Pro Phe Trp Asp Leu Ser
            485             490             495

Leu Glu Phe Pro Glu Arg Tyr Gln Cys Ser Gly Lys Asp Ile Ala Ser
            500             505             510

Gln Pro Cys Leu Val Thr Glu Met Leu Ala Lys Phe Thr Glu Thr Glu
            515             520             525

Ala Leu Glu Gly Lys Ile Tyr Val Cys Asp Gln Cys Asn Ser Lys Arg
    530             535             540

Arg Arg Phe Ser Ser Lys Pro Val Val Leu Thr Glu Ala Gln Lys Gln
545             550             555             560

Leu Met Ile Cys His Leu Pro Gln Val Leu Arg Leu His Leu Lys Arg
            565             570             575

Phe Arg Trp Ser Gly Arg Asn Asn Arg Glu Lys Ile Gly Val His Val
            580             585             590

Gly Phe Glu Glu Ile Leu Asn Met Glu Pro Tyr Cys Cys Arg Glu Thr
            595             600             605

Leu Lys Ser Leu Arg Pro Glu Cys Phe Ile Tyr Asp Leu Ser Ala Val
    610             615             620

Val Met His His Gly Lys Gly Phe Gly Ser Gly His Tyr Thr Ala Tyr
625             630             635             640

Cys Tyr Asn Ser Glu Gly Gly Phe Trp Val His Cys Asn Asp Ser Lys
            645             650             655

Leu Ser Met Cys Thr Met Asp Glu Val Cys Lys Ala Gln Ala Tyr Ile
            660             665             670

Leu Phe Tyr Thr Gln Arg Val Thr Glu Asn Gly His Ser Lys Leu Leu
            675             680             685

Pro Pro Glu Leu Leu Leu Gly Ser Gln His Pro Asn Glu Asp Ala Asp
    690             695             700
```

Thr Ser Ser Asn Glu Ile Leu Ser
705   710

<210> 70
<211> 289
<212> PRT
<213> Homo sapiens

<400> 70
Met Arg Val Lys Asp Pro Thr Lys Ala Leu Pro Glu Lys Ala Lys Arg
 1   5   10   15

Ser Lys Arg Pro Thr Val Pro His Asp Glu Asp Ser Ser Asp Asp Ile
            20   25   30

Ala Val Gly Leu Thr Cys Gln His Val Ser His Ala Ile Ser Val Asn
            35   40   45

His Val Lys Arg Ala Ile Ala Glu Asn Leu Trp Ser Val Cys Ser Glu
        50   55   60

Cys Leu Glu Glu Arg Arg Phe Tyr Asp Gly Gln Leu Val Leu Thr Ser
 65   70   75   80

Asp Ile Trp Leu Cys Leu Lys Cys Gly Phe Gln Gly Cys Gly Lys Asn
                85   90   95

Ser Glu Ser Gln His Ser Leu Lys His Phe Lys Ser Ser Arg Thr Glu
            100   105   110

Pro His Cys Ile Ile Ile Asn Leu Ser Thr Trp Ile Ile Trp Cys Tyr
        115   120   125

Glu Cys Asp Glu Lys Leu Ser Thr His Cys Asn Lys Lys Val Leu Ala
        130   135   140

Gln Ile Val Asp Phe Leu Gln Lys His Ala Ser Lys Thr Gln Thr Ser
145   150   155   160

Ala Phe Ser Arg Ile Met Lys Leu Cys Glu Glu Lys Cys Glu Thr Asp
                165   170   175

Glu Ile Gln Lys Gly Gly Lys Cys Arg Asn Leu Ser Val Arg Gly Ile
            180   185   190

Thr Asn Leu Gly Asn Thr Cys Phe Phe Asn Ala Val Met Gln Asn Leu
            195   200   205

Ala Gln Thr Tyr Thr Leu Thr Asp Leu Met Asn Glu Ile Lys Glu Ser
    210   215   220

Ser Thr Lys Leu Lys Ile Phe Pro Ser Ser Asp Ser Gln Leu Asp Pro
225   230   235   240

Leu Val Val Glu Leu Ser Arg Pro Gly Pro Leu Thr Ser Ala Leu Phe
                245   250   255

Leu Phe Leu His Ser Met Lys Glu Thr Glu Lys Gly Pro Leu Ser Pro
          260   265   270

Lys Val Leu Phe Asn Gln Leu Cys Gln Lys Arg Val His Leu His Leu
          275   280   285

Ile

<210> 71
<211> 366
<212> PRT
<213> Homo sapiens

<400> 71
Met Thr Val Arg Asn Ile Ala Ser Ile Cys Asn Met Gly Thr Asn Ala
 1   5   10   15

Ser Ala Leu Glu Lys Asp Ile Gly Pro Glu Gln Phe Pro Ile Asn Glu
        20   25   30

His Tyr Phe Gly Leu Val Asn Phe Gly Asn Thr Cys Tyr Cys Asn Ser
        35   40   45

Val Leu Gln Ala Leu Tyr Phe Cys Arg Pro Phe Arg Glu Asn Val Leu
    50   55   60

Ala Tyr Lys Ala Gln Gln Lys Lys Lys Glu Asn Leu Leu Thr Cys Leu
65   70   75   80

Ala Asp Leu Phe His Ser Ile Ala Thr Gln Lys Lys Lys Val Gly Val
          85   90   95

Ile Pro Pro Lys Lys Phe Ile Ser Arg Leu Arg Lys Glu Asn Asp Leu
        100   105   110

Phe Asp Asn Tyr Met Gln Gln Asp Ala His Glu Phe Leu Asn Tyr Leu
        115   120   125

Leu Asn Thr Ile Ala Asp Ile Leu Gln Glu Glu Lys Lys Gln Glu Lys
    130   135   140

Gln Asn Gly Lys Leu Lys Asn Gly Asn Met Asn Glu Pro Ala Glu Asn
145   150   155   160

Asn Lys Pro Glu Leu Thr Trp Val His Glu Ile Phe Gln Gly Thr Leu
        165   170   175

Thr Asn Glu Thr Arg Cys Leu Asn Cys Glu Thr Val Ser Ser Lys Asp
        180   185   190

Glu Asp Phe Leu Asp Leu Ser Val Asp Val Glu Gln Asn Thr Ser Ile
        195   200   205

Thr His Cys Leu Arg Asp Phe Ser Asn Thr Glu Thr Leu Cys Ser Glu
    210   215   220

```
Gln Lys Tyr Tyr Cys Glu Thr Cys Cys Ser Lys Gln Glu Ala Gln Lys
225             230             235                     240

Arg Met Arg Val Lys Lys Leu Pro Met Val Leu Ala Leu His Leu Lys
            245             250                 255

Arg Phe Lys Tyr Met Glu Gln Leu Arg Arg Tyr Thr Lys Leu Ser Tyr
            260             265             270

Arg Val Val Phe Pro Leu Glu Leu Arg Leu Phe Asn Thr Ser Ser Asp
            275             280             285

Ala Val Asn Leu Asp Arg Met Tyr Asp Leu Val Ala Val Val Val His
    290             295             300

Cys Gly Ser Gly Pro Asn Arg Gly His Tyr Ile Thr Ile Val Lys Ser
305             310             315                     320

His Gly Phe Trp Leu Leu Phe Asp Asp Asp Ile Val Glu Lys Ile Asp
            325             330             335

Ala Gln Ala Ile Glu Glu Phe Tyr Gly Leu Thr Ser Asp Ile Ser Lys
            340             345             350

Asn Ser Glu Ser Gly Tyr Ile Leu Phe Tyr Gln Ser Arg Glu
        355             360             365
```

```
<210> 72
<211> 1287
<212> PRT
<213> Homo sapiens

<400> 72
Met Val Pro Gly Glu Glu Asn Gln Leu Val Pro Lys Glu Ala Pro Leu
  1             5                 10                      15

Asp His Thr Ser Asp Lys Ser Leu Leu Asp Ala Asn Phe Glu Pro Gly
            20              25                  30

Lys Lys Asn Phe Leu His Leu Thr Asp Lys Asp Gly Glu Gln Pro Gln
        35              40                  45

Ile Leu Leu Glu Asp Ser Ser Ala Gly Glu Asp Ser Val His Asp Arg
    50              55                  60

Phe Ile Gly Pro Leu Pro Arg Glu Gly Ser Val Gly Ser Thr Ser Asp
65              70                  75                      80

Tyr Val Ser Gln Ser Tyr Ser Tyr Ser Ser Ile Leu Asn Lys Ser Glu
                85              90                  95

Thr Gly Tyr Val Gly Leu Val Asn Gln Ala Met Thr Cys Tyr Leu Asn
            100             105                 110

Ser Leu Leu Gln Thr Leu Phe Met Thr Pro Glu Phe Arg Asn Ala Leu
        115             120                 125
```

```
Tyr Lys Trp Glu Phe Glu Glu Ser Glu Glu Asp Pro Val Thr Ser Ile
    130             135             140
```

```
Pro Tyr Gln Leu Gln Arg Leu Phe Val Leu Leu Gln Thr Ser Lys Lys
145             150             155                 160
```

```
Arg Ala Ile Glu Thr Thr Asp Val Thr Arg Ser Phe Gly Trp Asp Ser
            165             170             175
```

```
Ser Glu Ala Trp Gln Gln His Asp Val Gln Glu Leu Cys Arg Val Met
            180             185             190
```

```
Phe Asp Ala Leu Glu Gln Lys Trp Lys Gln Thr Glu Gln Ala Asp Leu
        195             200             205
```

```
Ile Asn Glu Leu Tyr Gln Gly Lys Leu Lys Asp Tyr Val Arg Cys Leu
    210             215             220
```

```
Glu Cys Gly Tyr Glu Gly Trp Arg Ile Asp Thr Tyr Leu Asp Ile Pro
225             230             235             240
```

```
Leu Val Ile Arg Pro Tyr Gly Ser Ser Gln Ala Phe Ala Ser Val Glu
            245             -250            255
```

```
Glu Ala Leu His Ala Phe Ile Gln Pro Glu Ile Leu Asp Gly Pro Asn
            260             265             270
```

```
Gln Tyr Phe Cys Glu Arg Cys Lys Lys Lys Cys Asp Ala Arg Lys Gly
        275             280             285
```

```
Leu Arg Phe Leu His Phe Pro Tyr Leu Leu Thr Leu Gln Leu Lys Arg
    290             295             300
```

```
Phe Asp Phe Asp Tyr Thr Thr Met His Arg Ile Lys Leu Asn Asp Arg
305             310             315                 320
```

```
Met Thr Phe Pro Glu Glu Leu Asp Met Ser Thr Phe Ile Asp Val Glu
            325             330             335
```

```
Asp Glu Lys Ser Pro Gln Thr Glu Ser Cys Thr Asp Ser Gly Ala Glu
        340             345             350
```

```
Asn Glu Gly Ser Cys His Ser Asp Gln Met Ser Asn Asp Phe Ser Asn
        355             360             365
```

```
Asp Asp Gly Val Asp Glu Gly Ile Cys Leu Glu Thr Asn Ser Gly Thr
    370             375                 380
```

```
Glu Lys Ile Ser Lys Ser Gly Leu Glu Lys Asn Ser Leu Ile Tyr Glu
385             390             395                 400
```

```
Leu Phe Ser Val Met Ala His Ser Gly Ser Ala Ala Gly Gly His Tyr
            405             410             415
```

```
Tyr Ala Cys Ile Lys Ser Phe Ser Asp Glu Gln Trp Tyr Ser Phe Asp
            420             425             430
```

Asp Gln His Val Ser Arg Ile Thr Gln Glu Asp Ile Lys Lys Thr His
        435   440   445

Gly Gly Ser Ser Gly Ser Arg Gly Tyr Tyr Ser Ser Ala Phe Ala Ser
    450   455   460

Ser Thr Asn Ala Tyr Met Leu Ile Tyr Arg Leu Lys Asp Pro Ala Arg
465   470   475   480

Asn Ala Lys Phe Leu Glu Val Gly Glu Tyr Pro Glu His Ile Lys Asn
            485   490   495

Leu Val Gln Lys Glu Arg Glu Leu Glu Glu Gln Glu Lys Arg Gln Arg
        500   505   510

Glu Ile Glu Arg Asn Thr Cys Lys Ile Lys Leu Phe Cys Leu His Pro
        515   520   525

Thr Lys Gln Val Met Met Glu Asn Lys Leu Glu Val His Lys Asp Lys
    530   535   540

Thr Leu Lys Glu Ala Val Glu Met Ala Tyr Lys Met Met Asp Leu Glu
545   550   555   560

Glu Val Ile Pro Leu Asp Cys Cys Arg Leu Val Lys Tyr Asp Glu Phe
            565   570   575

His Asp Tyr Leu Glu Arg Ser Tyr Glu Gly Glu Glu Asp Thr Pro Met
        580   585   590

Gly Leu Leu Leu Gly Gly Val Lys Ser Thr Tyr Met Phe Asp Leu Leu
    595   600   605

Leu Glu Thr Arg Lys Pro Asp Gln Val Phe Gln Ser Tyr Lys Pro Gly
    610   615   620

Glu Val Met Val Lys Val His Val Val Asp Leu Lys Ala Glu Ser Val
625   630   635   640

Ala Ala Pro Ile Thr Val Arg Ala Tyr Leu Asn Gln Thr Val Thr Glu
            645   650   655

Phe Lys Gln Leu Ile Ser Lys Ala Ile His Leu Pro Ala Glu Thr Met
        660   665   670

Arg Ile Val Leu Glu Arg Cys Tyr Asn Asp Leu Arg Leu Leu Ser Val
        675   680   685

Ser Ser Lys Thr Leu Lys Ala Glu Gly Phe Phe Arg Ser Asn Lys Val
    690   695   700

Phe Val Glu Ser Ser Glu Thr Leu Asp Tyr Gln Met Ala Phe Ala Asp
705   710   715   720

Ser His Leu Trp Lys Leu Leu Asp Arg His Ala Asn Thr Ile Arg Leu
            725   730   735

Phe Val Leu Leu Pro Glu Gln Ser Pro Val Ser Tyr Ser Lys Arg Thr
            740   745   750

Ala Tyr Gln Lys Ala Gly Gly Asp Ser Gly Asn Val Asp Asp Asp Cys
            755   760   765

Glu Arg Val Lys Gly Pro Val Gly Ser Leu Lys Ser Val Glu Ala Ile
    770   775   780

Leu Glu Glu Ser Thr Glu Lys Leu Lys Ser Leu Ser Leu Gln Gln Gln
785   790   795   800

Gln Asp Gly Asp Asn Gly Asp Ser Ser Lys Ser Thr Glu Thr Ser Asp
            805   810   815

Phe Glu Asn Ile Glu Ser Pro Leu Asn Glu Arg Asp Ser Ser Ala Ser
            820   825   830

Val Asp Asn Arg Glu Leu Glu Gln His Ile Gln Thr Ser Asp Pro Glu
            835   840   845

Asn Phe Gln Ser Glu Glu Arg Ser Asp Ser Asp Val Asn Asn Asp Arg
    850   855   860

Ser Thr Ser Ser Val Asp Ser Asp Ile Leu Ser Ser Ser His Ser Ser
865   870   875   880

Asp Thr Leu Cys Asn Ala Asp Asn Ala Gln Ile Pro Leu Ala Asn Gly
            885   890   895

Leu Asp Ser His Ser Ile Thr Ser Ser Arg Arg Thr Lys Ala Asn Glu
            900   905   910

Gly Lys Lys Glu Thr Trp Asp Thr Ala Glu Glu Asp Ser Gly Thr Asp
    915   920   925

Ser Glu Tyr Asp Glu Ser Gly Lys Ser Arg Gly Glu Met Gln Tyr Met
    930   935   940

Tyr Phe Lys Ala Glu Pro Tyr Ala Ala Asp Glu Gly Ser Gly Glu Gly
945   950   955   960

His Lys Trp Leu Met Val His Val Asp Lys Arg Ile Thr Leu Ala Ala
            965   970   975

Phe Lys Gln His Leu Glu Pro Phe Val Gly Val Leu Ser Ser His Phe
            980   985   990

Lys Val Phe Arg Val Tyr Ala Ser Asn Gln Glu Phe Glu Ser Val Arg
    995   1000   1005

Leu Asn Glu Thr Leu Ser Ser Phe Ser Asp Asp Asn Lys Ile Thr Ile
    1010   1015   1020

Arg Leu Gly Arg Ala Leu Lys Lys Gly Glu Tyr Arg Val Lys Val Tyr
1025   1030   1035   1040

Gln Leu Leu Val Asn Glu Gln Glu Pro Cys Lys Phe Leu Leu Asp Ala
            1045   1050   1055

Val Phe Ala Lys Gly Met Thr Val Arg Gln Ser Lys Glu Glu Leu Ile
        1060   1065   1070

Pro Gln Leu Arg Glu Gln Cys Gly Leu Glu Leu Ser Ile Asp Arg Phe
        1075   1080   1085

Arg Leu Arg Lys Lys Thr Trp Lys Asn Pro Gly Thr Val Phe Leu Asp
    1090   1095   1100

Tyr His Ile Tyr Glu Glu Asp Ile Asn Ile Ser Ser Asn Trp Glu Val
1105   1110   1115   1120

Phe Leu Glu Val Leu Asp Gly Val Glu Lys Met Lys Ser Met Ser Gln
            1125   1130   1135

Leu Ala Val Leu Ser Arg Arg Trp Lys Pro Ser Glu Met Lys Leu Asp
        1140   1145   1150

Pro Phe Gln Glu Val Val Leu Glu Ser Ser Ser Val Asp Glu Leu Arg
        1155   1160   1165

Glu Lys Leu Ser Glu Ile Ser Gly Ile Pro Leu Asp Asp Ile Glu Phe
    1170   1175   1180

Ala Lys Gly Arg Gly Thr Phe Pro Cys Asp Ile Ser Val Leu Asp Ile
1185   1190   1195   1200

His Gln Asp Leu Asp Trp Asn Pro Lys Val Ser Thr Leu Asn Val Trp
        1205   1210   1215

Pro Leu Tyr Ile Cys Asp Asp Gly Ala Val Ile Phe Tyr Arg Asp Lys
        1220   1225   1230

Thr Glu Glu Leu Met Glu Leu Thr Asp Glu Gln Arg Asn Glu Leu Met
        1235   1240   1245

Lys Lys Glu Ser Ser Arg Leu Gln Lys Thr Gly His Arg Val Thr Tyr
    1250   1255   1260

Ser Pro Arg Lys Glu Lys Ala Leu Lys Ile Tyr Leu Asp Gly Ala Pro
1265   1270   1275   1280

Asn Lys Asp Leu Thr Gln Asp
            1285

<210> 73
<211> 1604
<212> PRT
<213> Homo sapiens

<400> 73
Met Gly Ala Lys Glu Ser Arg Ile Gly Phe Leu Ser Tyr Glu Glu Ala
  1   5   10   15

```
Leu Arg Arg Val Thr Asp Val Glu Leu Lys Arg Leu Lys Asp Ala Phe
        20                  25              30

Lys Arg Thr Cys Gly Leu Ser Tyr Tyr Met Gly Gln His Cys Phe Ile
        35                  40              45

Arg Glu Val Leu Gly Asp Gly Val Pro Pro Lys Val Ala Glu Val Ile
    50                  55              60

Tyr Cys Ser Phe Gly Gly Thr Ser Lys Gly Leu His Phe Asn Asn Leu
65                  70              75                  80

Ile Val Gly Leu Val Leu Leu Thr Arg Gly Lys Asp Glu Glu Lys Ala
            85                  90                  95

Lys Tyr Ile Phe Ser Leu Phe Ser Ser Glu Ser Gly Asn Tyr Val Ile
            100             105             110

Arg Glu Glu Met Glu Arg Met Leu His Val Val Asp Gly Lys Val Pro
        115             120             125

Asp Thr Leu Arg Lys Cys Phe Ser Glu Gly Glu Lys Val Asn Tyr Glu
        130             135             140

Lys Phe Arg Asn Trp Leu Phe Leu Asn Lys Asp Ala Phe Thr Phe Ser
145             150             155             160

Arg Trp Leu Leu Ser Gly Gly Val Tyr Val Thr Leu Thr Asp Asp Ser
            165             170             175

Asp Thr Pro Thr Phe Tyr Gln Thr Leu Ala Gly Val Thr His Leu Glu
        180             185             190

Glu Ser Asp Ile Ile Asp Leu Glu Lys Arg Tyr Trp Leu Leu Lys Ala
        195             200             205

Gln Ser Arg Thr Gly Arg Phe Asp Leu Glu Thr Phe Gly Pro Leu Val
    210             215             220

Ser Pro Pro Ile Arg Pro Ser Leu Ser Glu Gly Leu Phe Asn Ala Phe
225             230             235             240

Asp Glu Asn Arg Asp Asn His Ile Asp Phe Lys Glu Ile Ser Cys Gly
            245             250             255

Leu Ser Ala Cys Cys Arg Gly Pro Leu Ala Glu Arg Gln Lys Phe Cys
            260             265             270

Phe Lys Val Phe Asp Val Asp Arg Asp Gly Val Leu Ser Arg Val Glu
        275             280             285

Leu Arg Asp Met Val Val Ala Leu Leu Glu Val Trp Lys Asp Asn Arg
        290             295             300

Thr Asp Asp Ile Pro Glu Leu His Met Asp Leu Ser Asp Ile Val Glu
305             310             315             320
```

Gly Ile Leu Asn Ala His Asp Thr Thr Lys Met Gly His Leu Thr Leu
            325   330   335

Glu Asp Tyr Gln Ile Trp Ser Val Lys Asn Val Leu Ala Asn Glu Phe
            340   345   350

Leu Asn Leu Leu Phe Gln Val Cys His Ile Val Leu Gly Leu Arg Pro
            355   360   365

Ala Thr Pro Glu Glu Glu Gly Gln Ile Ile Arg Gly Trp Leu Glu Arg
            370   375   380

Glu Ser Arg Tyr Gly Leu Gln Ala Gly His Asn Trp Phe Ile Ile Ser
385   390   395   400

Met Gln Trp Trp Gln Gln Trp Lys Glu Tyr Val Lys Tyr Asp Ala Asn
            405   410   415

Pro Val Val Ile Glu Pro Ser Ser Val Leu Asn Gly Gly Lys Tyr Ser
            420   425   430

Phe Gly Thr Ala Ala His Pro Met Glu Gln Val Glu Asp Arg Ile Gly
            435   440   445

Ser Ser Leu Ser Tyr Val Asn Thr Thr Glu Glu Lys Phe Ser Asp Asn
            450   455   460

Ile Ser Thr Ala Ser Glu Ala Ser Glu Thr Ala Gly Ser Gly Phe Leu
465   470   475   480

Tyr Ser Ala Thr Pro Gly Ala Asp Val Cys Phe Ala Arg Gln His Asn
            485   490   495

Thr Ser Asp Asn Asn Asn Gln Cys Leu Leu Gly Ala Asn Gly Asn Ile
            500   505   510

Leu Leu His Leu Asn Pro Gln Lys Pro Gly Ala Ile Asp Asn Gln Pro
            515   520   525

Leu Val Thr Gln Glu Pro Val Lys Ala Thr Ser Leu Thr Leu Glu Gly
            530   535   540

Gly Arg Leu Lys Arg Thr Pro Gln Leu Ile His Gly Arg Asp Tyr Glu
545   550   555   560

Met Val Pro Glu Pro Val Trp Arg Ala Leu Tyr His Trp Tyr Gly Ala
            565   570   575

Asn Leu Ala Leu Pro Arg Pro Val Ile Lys Asn Ser Lys Thr Asp Ile
            580   585   590

Pro Glu Leu Glu Leu Phe Pro Arg Tyr Leu Leu Phe Leu Arg Gln Gln
            595   600   605

Pro Ala Thr Arg Thr Gln Gln Ser Asn Ile Trp Val Asn Met Gly Asn
            610   615   620

Val Pro Ser Pro Asn Ala Pro Leu Lys Arg Val Leu Ala Tyr Thr Gly
625   630   635   640

Cys Phe Ser Arg Met Gln Thr Ile Lys Glu Ile His Glu Tyr Leu Ser
            645   650   655

Gln Arg Leu Arg Ile Lys Glu Glu Asp Met Arg Leu Trp Leu Tyr Asn
        660   665   670

Ser Glu Asn Tyr Leu Thr Leu Leu Asp Asp Glu Asp His Lys Leu Glu
        675   680   685

Tyr Leu Lys Ile Gln Asp Glu Gln His Leu Val Ile Glu Val Arg Asn
        690   695   700

Lys Asp Met Ser Trp Pro Glu Glu Met Ser Phe Ile Ala Asn Ser Ser
705   710   ·   715   720

Lys Ile Asp Arg His Lys Val Pro Thr Glu Lys Gly Ala Thr Gly Leu
            725   730   735

Ser Asn Leu Gly Asn Thr Cys Phe Met Asn Ser Ser Ile Gln Cys Val
            740   745   750

Ser Asn Thr Gln Pro Leu Thr Gln Tyr Phe Ile Ser Gly Arg His Leu
        755   760   765

Tyr Glu Leu Asn Arg Thr Asn Pro Ile Gly Met Lys Gly His Met Ala
    770   775   780

Lys Cys Tyr Gly Asp Leu Val Gln Glu Leu Trp Ser Gly Thr Gln Lys
785   790   795   800

Asn Val Ala Pro Leu Lys Leu Arg Trp Thr Ile Ala Lys Tyr Ala Pro
            805   810   815

Arg Phe Asn Gly Phe Gln Gln Gln Asp Ser Gln Glu Leu Leu Ala Phe
            820   825   830

Leu Leu Asp Gly Leu His Glu Asp Leu Asn Arg Val His Glu Lys Pro
        835   840   845

Tyr Val Glu Leu Lys Asp Ser Asp Gly Arg Pro Asp Trp Glu Val Ala
        850   855   860

Ala Glu Ala Trp Asp Asn His Leu Arg Arg Asn Arg Ser Ile Val Val
865   870   875   880

Asp Leu Phe His Gly Gln Leu Arg Ser Gln Val Lys Cys Lys Thr Cys
            885   890   895

Gly His Ile Ser Val Arg Phe Asp Pro Phe Asn Phe Leu Ser Leu Pro
            900   905   910

Leu Pro Met Asp Ser Tyr Met His Leu Glu Ile Thr Val Ile Lys Leu
        915   920   925

Asp Gly Thr Thr Pro Val Arg Tyr Gly Leu Arg Leu Asn Met Asp Glu
   930   935   940

Lys Tyr Thr Gly Leu Lys Lys Gln Leu Ser Asp Leu Cys Gly Leu Asn
945   950   955   960

Ser Glu Gln Ile Leu Leu Ala Glu Val His Gly Ser Asn Ile Lys Asn
         965   970   975

Phe Pro Gln Asp Asn Gln Lys Val Arg Leu Ser Val Ser Gly Phe Leu
         980   985   990

Cys Ala Phe Glu Ile Pro Val Pro Val Ser Pro Ile Ser Ala Ser Ser
        995   1000   1005

Pro Thr Gln Thr Asp Phe Ser Ser Ser Pro Ser Thr Asn Glu Met Phe
  1010   1015   1020

Thr Leu Thr Thr Asn Gly Asp Leu Pro Arg Pro Ile Phe Ile Pro Asn
1025   1030   1035   1040

Gly Met Pro Asn Thr Val Val Pro Cys Gly Thr Glu Lys Asn Phe Thr
        1045   1050   1055

Asn Gly Met Val Asn Gly His Met Pro Ser Leu Pro Asp Ser Pro Phe
        1060   1065   1070

Thr Gly Tyr Ile Ile Ala Val His Arg Lys Met Met Arg Thr Glu Leu
      1075   1080   1085

Tyr Phe Leu Ser Ser Gln Lys Asn Arg Pro Ser Leu Phe Gly Met Pro
  1090   1095   1100

Leu Ile Val Pro Cys Thr Val His Thr Arg Lys Lys Asp Leu Tyr Asp
1105   1110   1115   1120

Ala Val Trp Ile Gln Val Ser Arg Leu Ala Ser Pro Leu Pro Pro Gln
        1125   1130   1135

Glu Ala Ser Asn His Ala Gln Asp Cys Asp Asp Ser Met Gly Tyr Gln
        1140   1145   1150

Tyr Pro Phe Thr Leu Arg Val Val Gln Lys Asp Gly Asn Ser Cys Ala
      1155   1160   1165

Trp Cys Pro Trp Tyr Arg Phe Cys Arg Gly Cys Lys Ile Asp Cys Gly
  1170   1175   1180

Glu Asp Arg Ala Phe Ile Gly Asn Ala Tyr Ile Ala Val Asp Trp Asp
1185   1190   1195   1200

Pro Thr Ala Leu His Leu Arg Tyr Gln Thr Ser Gln Glu Arg Val Val
        1205   1210   1215

Asp Glu His Glu Ser Val Glu Gln Ser Arg Arg Ala Gln Ala Glu Pro
        1220   1225   1230

Ile Asn Leu Asp Ser Cys Leu Arg Ala Phe Thr Ser Glu Glu Glu Leu
    1235   1240   1245

Gly Glu Asn Glu Met Tyr Tyr Cys Ser Lys Cys Lys Thr His Cys Leu
    1250   1255   1260

Ala Thr Lys Lys Leu Asp Leu Trp Arg Leu Pro Pro Ile Leu Ile Ile
1265   1270   1275   1280

His Leu Lys Arg Phe Gln Phe Val Asn Gly Arg Trp Ile Lys Ser Gln
        1285   1290   1295

Lys Ile Val Lys Phe Pro Arg Glu Ser Phe Asp Pro Ser Ala Phe Leu
        1300   1305   1310

Val Pro Arg Asp Pro Ala Leu Cys Gln His Lys Pro Leu Thr Pro Gln
    1315   1320   1325

Gly Asp Glu Leu Ser Glu Pro Arg Ile Leu Ala Arg Glu Val Lys Lys
    1330   1335   1340

Val Asp Ala Gln Ser Ser Ala Gly Glu Glu Asp Val Leu Leu Ser Lys
1345   1350   1355   1360

Ser Pro Ser Ser Leu Ser Ala Asn Ile Ile Ser Ser Pro Lys Gly Ser
        1365   1370   1375

Pro Ser Ser Ser Arg Lys Ser Gly Thr Ser Cys Pro Ser Ser Lys Asn
        1380   1385   1390

Ser Ser Pro Asn Ser Ser Pro Arg Thr Leu Gly Arg Ser Lys Gly Arg
    1395   1400   1405

Leu Arg Leu Pro Gln Ile Gly Ser Lys Asn Lys Leu Ser Ser Ser Lys
    1410   1415   1420

Glu Asn Leu Asp Ala Ser Lys Glu Asn Gly Ala Gly Gln Ile Cys Glu
1425   1430   1435   1440

Leu Ala Asp Ala Leu Ser Arg Gly His Val Leu Gly Gly Ser Gln Pro
        1445   1450   1455

Glu Leu Val Thr Pro Gln Asp His Glu Val Ala Leu Ala Asn Gly Phe
        1460   1465   1470

Leu Tyr Glu His Glu Ala Cys Gly Asn Gly Tyr Ser Asn Gly Gln Leu
        1475   1480   1485

Gly Asn His Ser Glu Glu Asp Ser Thr Asp Asp Gln Arg Glu Asp Thr
    1490   1495   1500

Arg Ile Lys Pro Ile Tyr Asn Leu Tyr Ala Ile Ser Cys His Ser Gly
1505   1510   1515   1520

Ile Leu Gly Gly Gly His Tyr Val Thr Tyr Ala Lys Asn Pro Asn Cys
        1525   1530   1535

Lys Trp Tyr Cys Tyr Asn Asp Ser Ser Cys Lys Glu Leu His Pro Asp
          1540   1545   1550

Glu Ile Asp Thr Asp Ser Ala Tyr Ile Leu Phe Tyr Glu Gln Gln Gly
          1555   1560   1565

Ile Asp Tyr Ala Gln Phe Leu Pro Lys Thr Asp Gly Lys Lys Met Ala
     1570   1575   1580

Asp Thr Ser Ser Met Asp Glu Asp Phe Glu Ser Asp Tyr Lys Lys Tyr
1585   1590   1595   1600

Cys Val Leu Gln

<210> 74
<211> 1042
<212> PRT
<213> Homo sapiens

<400> 74
Met Asp Lys Ile Leu Glu Gly Leu Val Ser Ser Ser His Pro Leu Pro
  1   5   10   15

Leu Lys Arg Val Ile Val Arg Lys Val Val Glu Ser Ala Glu His Trp
            20   25   30

Leu Asp Glu Ala Gln Cys Glu Ala Met Phe Asp Leu Thr Thr Arg Leu
          35   40   45

Ile Leu Glu Gly Gln Asp Pro Phe Gln Arg Gln Val Gly His Gln Val
     50   55   60

Leu Glu Ala Tyr Ala Arg Tyr His Arg Pro Glu Phe Glu Ser Phe Phe
65   70   75   80

Asn Lys Thr Phe Val Leu Gly Leu Leu His Gln Gly Tyr His Ser Leu
               85   90   95

Asp Arg Lys Asp Val Ala Ile Leu Asp Tyr Ile His Asn Gly Leu Lys
          100   105   110

Leu Ile Met Ser Cys Pro Ser Val Leu Asp Leu Phe Ser Leu Leu Gln
          115   120   125

Val Glu Val Leu Arg Met Val Cys Glu Arg Pro Glu Pro Gln Leu Cys
     130   135   140

Ala Arg Leu Ser Asp Leu Leu Thr Asp Phe Val Gln Cys Ile Pro Lys
145   150   155   160

Gly Lys Leu Ser Ile Thr Phe Cys Gln Gln Leu Val Arg Thr Ile Gly
               165   170   175

His Phe Gln Cys Val Ser Thr Gln Glu Arg Glu Leu Arg Glu Tyr Val
          180   185   190

Ser Gln Val Thr Lys Val Ser Asn Leu Leu Gln Asn Ile Trp Lys Ala
        195   200   205

Glu Pro Ala Thr Leu Leu Pro Ser Leu Gln Glu Val Phe Ala Ser Ile
    210   215   220

Ser Ser Thr Asp Ala Ser Phe Glu Pro Ser Val Ala Leu Ala Ser Leu
225   230   235   240

Val Gln His Ile Pro Leu Gln Met Ile Thr Val Leu Ile Arg Ser Leu
            245   250   255

Thr Thr Asp Pro Asn Val Lys Asp Ala Ser Met Thr Gln Ala Leu Cys
            260   265   270

Arg Met Ile Asp Trp Leu Ser Trp Pro Leu Ala Gln His Val Asp Thr
            275   280   285

Trp Val Ile Ala Leu Leu Lys Gly Leu Ala Ala Val Gln Lys Phe Thr
    290   295   300

Ile Leu Ile Asp Val Thr Leu Leu Lys Ile Glu Leu Val Phe Asn Arg
305   310   -   315   320

Leu Trp Phe Pro Leu Val Arg Pro Gly Ala Leu Ala Val Leu Ser His
            325   330   335

Met Leu Leu Ser Phe Gln His Ser Pro Glu Ala Phe His Leu Ile Val
            340   345   350

Pro His Val Val Asn Leu Val His Ser Phe Lys Asn Asp Gly Leu Pro
            355   360   365

Ser Ser Thr Ala Phe Leu Val Gln Leu Thr Glu Leu Ile His Cys Met
    370   375   380

Met Tyr His Tyr Ser Gly Phe Pro Asp Leu Tyr Glu Pro Ile Leu Glu
385   390   395   400

Ala Ile Lys Asp Phe Pro Lys Pro Ser Glu Glu Lys Ile Lys Leu Ile
            405   410   415

Leu Asn Gln Ser Ala Trp Thr Ser Gln Ser Asn Ser Leu Ala Ser Cys
        420   425   430

Leu Ser Arg Leu Ser Gly Lys Ser Glu Thr Gly Lys Thr Gly Leu Ile
        435   440   445

Asn Leu Gly Asn Thr Cys Tyr Met Asn Ser Val Ile Gln Ala Leu Phe
    450   455   460

Met Ala Thr Asp Phe Arg Arg Gln Val Leu Ser Leu Asn Leu Asn Gly
465   470   475   480

Cys Asn Ser Leu Met Lys Lys Leu Gln His Leu Phe Ala Phe Leu Ala
            485   490   495

His Thr Gln Arg Glu Ala Tyr Ala Pro Arg Ile Phe Phe Glu Ala Ser
              500   505   510

Arg Pro Pro Trp Phe Thr Pro Arg Ser Gln Gln Asp Cys Ser Glu Tyr
          515   520   525

Leu Arg Phe Leu Leu Asp Arg Leu His Glu Glu Glu Lys Ile Leu Lys
      530   535   540

Val Gln Ala Ser His Lys Pro Ser Glu Ile Leu Glu Cys Ser Glu Thr
545   550   555   560

Ser Leu Gln Glu Val Ala Ser Lys Ala Ala Val Leu Thr Glu Thr Pro
              565   570   575

Arg Thr Ser Asp Gly Glu Lys Thr Leu Ile Glu Lys Met Phe Gly Gly
          580   585   590

Lys Leu Arg Thr His Ile Arg Cys Leu Asn Cys Arg Ser Thr Ser Gln
          595   600   605

Lys Val Glu Ala Phe Thr Asp Leu Ser Leu Ala Phe Cys Pro Ser Ser
    610   615   620

Ser Leu Glu Asn Met Ser Val Gln Asp Pro Ala Ser Ser Pro Ser Ile
625   630   635   640

Gln Asp Gly Gly Leu Met Gln Ala Ser Val Pro Gly Pro Ser Glu Glu
              645   650   655

Pro Val Val Tyr Asn Pro Thr Thr Ala Ala Phe Ile Cys Asp Ser Leu
              660   665   670

Val Asn Glu Lys Thr Ile Gly Ser Pro Pro Asn Glu Phe Tyr Cys Ser
          675   680   685

Glu Asn Thr Ser Val Pro Asn Glu Ser Asn Lys Ile Leu Val Asn Lys
      690   695   700

Asp Val Pro Gln Lys Pro Gly Gly Glu Thr Thr Pro Ser Val Thr Asp
705   710   715   720

Leu Leu Asn Tyr Phe Leu Ala Pro Glu Ile Leu Thr Gly Asp Asn Gln
              725   730   735

Tyr Tyr Cys Glu Asn Cys Ala Ser Leu Gln Asn Ala Glu Lys Thr Met
          740   745   750

Gln Ile Thr Glu Glu Pro Glu Tyr Leu Ile Leu Thr Leu Leu Arg Phe
          755   760   765

Ser Tyr Asp Gln Lys Tyr His Val Arg Arg Lys Ile Leu Asp Asn Val
      770   775   780

Ser Leu Pro Leu Val Leu Glu Leu Pro Val Lys Arg Ile Thr Ser Phe
785   790   795   800

Ser Ser Leu Ser Glu Ser Trp Ser Val Asp Val Asp Phe Thr Asp Leu
            805   810   815

Ser Glu Asn Leu Ala Lys Lys Leu Lys Pro Ser Gly Thr Asp Glu Ala
            820   825   830

Ser Cys Thr Lys Leu Val Pro Tyr Leu Leu Ser Ser Val Val His
            835   840   845

Ser Gly Ile Ser Ser Glu Ser Gly His Tyr Tyr Ser Tyr Ala Arg Asn
    850   855   860

Ile Thr Ser Thr Asp Ser Ser Tyr Gln Met Tyr His Gln Ser Glu Ala
865   870   875   880

Leu Ala Leu Ala Ser Ser Gln Ser His Leu Leu Gly Arg Asp Ser Pro
            885   890   895

Ser Ala Val Phe Glu Gln Asp Leu Glu Asn Lys Glu Met Ser Lys Glu
            900   905   910

Trp Phe Leu Phe Asn Asp Ser Arg Val Thr Phe Thr Ser Phe Gln Ser
    915   920   925

Val Gln Lys Ile Thr Ser Arg Phe Pro Lys Asp Thr Ala Tyr Val Leu
    930   935   940

Leu Tyr Lys Lys Gln His Ser Thr Asn Gly Leu Ser Gly Asn Asn Pro
945   950   955   960

Thr Ser Gly Leu Trp Ile Asn Gly Asp Pro Pro Leu Gln Lys Glu Leu
            965   970   975

Met Asp Ala Ile Thr Lys Asp Asn Lys Leu Tyr Leu Gln Glu Gln Glu
            980   985   990

Leu Asn Ala Arg Ala Arg Ala Leu Gln Ala Ala Ser Ala Ser Cys Ser
            995   1000   1005

Phe Arg Pro Asn Gly Phe Asp Asp Asn Asp Pro Pro Gly Ser Cys Gly
    1010   1015   1020

Pro Thr Gly Gly Gly Gly Gly Gly Gly Phe Asn Thr Val Gly Arg Leu
1025   1030   1035   1040

Val Phe

<210> 75
<211> 1033
<212> PRT
<213> Homo sapiens

<400> 75
Met Ala Pro Arg Leu Gln Leu Glu Lys Ala Ala Trp Arg Trp Ala Glu
    1   5   10   15

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Thr Val Arg Pro Glu Glu Val Ser Gln Glu His Ile Glu Thr Ala Tyr
             20              25              30

Arg Ile Trp Leu Glu Pro Cys Ile Arg Gly Val Cys Arg Arg Asn Cys
         35              40              45

Lys Gly Asn Pro Asn Cys Leu Val Gly Ile Gly Glu His Ile Trp Leu
     50              55              60

Gly Glu Ile Asp Glu Asn Ser Phe His Asn Ile Asp Asp Pro Asn Cys
65              70              75              80

Glu Arg Arg Lys Lys Asn Ser Phe Val Gly Leu Thr Asn Leu Gly Ala
             85              90              95

Thr Cys Tyr Val Asn Thr Phe Leu Gln Val Trp Phe Leu Asn Leu Glu
             100             105             110

Leu Arg Gln Ala Leu Tyr Leu Cys Pro Ser Thr Cys Ser Asp Tyr Met
         115             120             125

Leu Gly Asp Gly Ile Gln Glu Glu Lys Asp Tyr Glu Pro Gln Thr Ile
     130             135             140

Cys Glu His Leu Gln Tyr Leu Phe Ala Leu Leu Gln Asn Ser Asn Arg
145             150             155             160

Arg Tyr Ile Asp Pro Ser Gly Phe Val Lys Ala Leu Gly Leu Asp Thr
             165             170             175

Gly Gln Gln Gln Asp Ala Gln Glu Phe Ser Lys Leu Phe Met Ser Leu
             180             185             190

Leu Glu Asp Thr Leu Ser Lys Gln Lys Asn Pro Asp Val Arg Asn Ile
         195             200             205

Val Gln Gln Gln Phe Cys Gly Glu Tyr Ala Tyr Val Thr Val Cys Asn
     210             215             220

Gln Cys Gly Arg Glu Ser Lys Leu Leu Ser Lys Phe Tyr Glu Leu Glu
225             230             235             240

Leu Asn Ile Gln Gly His Lys Gln Leu Thr Asp Cys Ile Ser Glu Phe
             245             250             255

Leu Lys Glu Glu Lys Leu Glu Gly Asp Asn Arg Tyr Phe Cys Glu Asn
         260             265             270

Cys Gln Ser Lys Gln Asn Ala Thr Arg Lys Ile Arg Leu Leu Ser Leu
         275             280             285

Pro Cys Thr Leu Asn Leu Gln Leu Met Arg Phe Val Phe Asp Arg Gln
     290             295             300

Thr Gly His Lys Lys Lys Leu Asn Thr Tyr Ile Gly Phe Ser Glu Ile
305             310             315             320
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Leu Asp Met Glu Pro Tyr Val Glu His Lys Gly Gly Ser Tyr Val Tyr
                    325   330   335

Glu Leu Ser Ala Val Leu Ile His Arg Gly Val Ser Ala Tyr Ser Gly
                340   345   350

His Tyr Ile Ala His Val Lys Asp Pro Gln Ser Gly Glu Trp Tyr Lys
            355   360   365

Phe Asn Asp Glu Asp Ile Glu Lys Met Glu Gly Lys Lys Leu Gln Leu
    370   375   380

Gly Ile Glu Glu Asp Leu Glu Pro Ser Lys Ser Gln Thr Arg Lys Pro
385   390   395   400

Lys Cys Gly Lys Gly Thr His Cys Ser Arg Asn Ala Tyr Met Leu Val
            405   410   415

Tyr Arg Leu Gln Thr Gln Glu Lys Pro Asn Thr Thr Val Gln Val Pro
            420   425   430

Ala Phe Leu Gln Glu Leu Val Asp Arg Asp Asn Ser Lys Phe Glu Glu
            435   440   445

Trp Cys Ile Glu Met Ala Glu Met Arg Lys Gln Ser Val Asp Lys Gly
    450   455   460

Lys Ala Lys His Glu Glu Val Lys Glu Leu Tyr Gln Arg Leu Pro Ala
465   470   475   480

Gly Ala Glu Pro Tyr Glu Phe Val Ser Leu Glu Trp Leu Gln Lys Trp
            485   490   495

Leu Asp Glu Ser Thr Pro Thr Lys Pro Ile Asp Asn His Ala Cys Leu
            500   505   510

Cys Ser His Asp Lys Leu His Pro Asp Lys Ile Ser Ile Met Lys Arg
            515   520   525

Ile Ser Glu Tyr Ala Ala Asp Ile Phe Tyr Ser Arg Tyr Gly Gly Gly
        530   535   540

Pro Arg Leu Thr Val Lys Ala Leu Cys Lys Glu Cys Val Val Glu Arg
545   550   555   560

Cys Arg Ile Leu Arg Leu Lys Asn Gln Leu Asn Glu Asp Tyr Lys Thr
            565   570   575

Val Asn Asn Leu Leu Lys Ala Ala Val Lys Gly Asp Gly Phe Trp Val
            580   585   590

Gly Lys Ser Ser Leu Arg Ser Trp Arg Gln Leu Ala Leu Glu Gln Leu
            595   600   605

Asp Glu Gln Asp Gly Asp Ala Glu Gln Ser Asn Gly Lys Met Asn Gly
    610   615   620

Ser Thr Leu Asn Lys Asp Glu Ser Lys Glu Glu Arg Lys Glu Glu Glu
625   630   635   640

Glu Leu Asn Phe Asn Glu Asp Ile Leu Cys Pro His Gly Glu Leu Cys
            645   650   655

Ile Ser Glu Asn Glu Arg Arg Leu Val Ser Lys Glu Ala Trp Ser Lys
            660   665   670

Leu Gln Gln Tyr Phe Pro Lys Ala Pro Glu Phe Pro Ser Tyr Lys Glu
        675   680   685

Cys Cys Ser Gln Cys Lys Ile Leu Glu Arg Glu Gly Glu Glu Asn Glu
        690   695   700

Ala Leu His Lys Met Ile Ala Asn Glu Gln Lys Thr Ser Leu Pro Asn
705   710   715   720

Leu Phe Gln Asp Lys Asn Arg Pro Cys Leu Ser Asn Trp Pro Glu Asp
            725   730   735

Thr Asp Val Leu Tyr Ile Val Ser Gln Phe Phe Val Glu Glu Trp Arg
            740   745-   750

Lys Phe Val Arg Lys Pro Thr Arg Cys Ser Pro Val Ser Ser Val Gly
        755   760   765

Asn Ser Ala Leu Leu Cys Pro His Gly Gly Leu Met Phe Thr Phe Ala
        770   775   780

Ser Met Thr Lys Glu Asp Ser Lys Leu Ile Ala Leu Ile Trp Pro Ser
785   790   795   800

Glu Trp Gln Met Ile Gln Lys Leu Phe Val Val Asp His Val Ile Lys
            805   810   815

Ile Thr Arg Ile Glu Val Gly Asp Val Asn Pro Ser Glu Thr Gln Tyr
        820   825   830

Ile Ser Glu Pro Lys Leu Cys Pro Glu Cys Arg Glu Gly Leu Leu Cys
        835   840   845

Gln Gln Gln Arg Asp Leu Arg Glu Tyr Thr Gln Ala Thr Ile Tyr Val
850   855   860

His Lys Val Val Asp Asn Lys Lys Val Met Lys Asp Ser Ala Pro Glu
865   870   875   880

Leu Asn Val Ser Ser Ser Glu Thr Glu Glu Asp Lys Glu Glu Ala Lys
            885   890   895

Pro Asp Gly Glu Lys Asp Pro Asp Phe Asn Gln Ser Asn Gly Gly Thr
            900   905   910

Lys Arg Gln Lys Ile Ser His Gln Asn Tyr Ile Ala Tyr Gln Lys Gln
        915   920   925

Val Ile Arg Arg Ser Met Arg His Arg Lys Val Arg Gly Glu Lys Ala
    930   935   940

Leu Leu Val Ser Ala Asn Gln Thr Leu Lys Glu Leu Lys Ile Gln Ile
945   950   955   960

Met His Ala Phe Ser Val Ala Pro Phe Asp Gln Asn Leu Ser Ile Asp
                965   970   975

Gly Lys Ile Leu Ser Asp Asp Cys Ala Thr Leu Gly Thr Leu Gly Val
            980   985   990

Ile Pro Glu Ser Val Ile Leu Leu Lys Ala Asp Glu Pro Ile Ala Asp
        995   1000   1005

Tyr Ala Ala Met Asp Asp Val Met Gln Val Cys Met Pro Glu Glu Gly
    1010   1015   .   1020

Phe Lys Gly Thr Gly Leu Leu Gly His
1025   1030

<210> 76
<211> 517
<212> PRT
<213> Homo sapiens

<400> 76
Met Leu Ser Ser Arg Ala Glu Ala Ala Met Thr Ala Ala Asp Arg Ala
 1   5   10   15

Ile Gln Arg Phe Leu Arg Thr Gly Ala Ala Val Arg Tyr Lys Val Met
            20   25   30

Lys Asn Trp Gly Val Ile Gly Gly Ile Ala Ala Ala Leu Ala Ala Gly
        35   40   45

Ile Tyr Val Ile Trp Gly Pro Ile Thr Glu Arg Lys Lys Arg Arg Lys
    50   55   60

Gly Leu Val Pro Gly Leu Val Asn Leu Gly Asn Thr Cys Phe Met Asn
65   70   75   80

Ser Leu Leu Gln Gly Leu Ser Ala Cys Pro Ala Phe Ile Arg Trp Leu
            85   90   95

Glu Glu Phe Thr Ser Gln Tyr Ser Arg Asp Gln Lys Glu Pro Pro Ser
            100   105   110

His Gln Tyr Leu Ser Leu Thr Leu Leu His Leu Leu Lys Ala Leu Ser
        115   120   125

Cys Gln Glu Val Thr Asp Asp Glu Val Leu Asp Ala Ser Cys Leu Leu
    130   135   140

Asp Val Leu Arg Met Tyr Arg Trp Gln Ile Ser Ser Phe Glu Glu Gln
145   150   155   160

Asp Ala His Glu Leu Phe His Val Ile Thr Ser Ser Leu Glu Asp Glu
            165   170   175

Arg Asp Arg Gln Pro Arg Val Thr His Leu Phe Asp Val His Ser Leu
         180   185   190

Glu Gln Gln Ser Glu Ile Thr Pro Lys Gln Ile Thr Cys Arg Thr Arg
      195   200   205

Gly Ser Pro His Pro Thr Ser Asn His Trp Lys Ser Gln His Pro Phe
     210   215   220

His Gly Arg Leu Thr Ser Asn Met Val Cys Lys His Cys Glu His Gln
225   230   235   240

Ser Pro Val Arg Phe Asp Thr Phe Asp Ser Leu Ser Leu Ser Ile Pro
         245   250   255

Ala Ala Thr Trp Gly His Pro Leu Thr Leu Asp His Cys Leu His His
        260   265   270

Phe Ile Ser Ser Glu Ser Val Arg Asp Val Val Cys Asp Asn Cys Thr
      275   280   285

Lys Ile Glu Ala Lys Gly Thr Leu Asn Gly Glu Lys Val Glu His Gln
     290   295   300

Arg Thr Thr Phe Val Lys Gln Leu Lys Leu Gly Lys Leu Pro Gln Cys
305   310   315   320

Leu Cys Ile His Leu Gln Arg Leu Ser Trp Ser Ser His Gly Thr Pro
        325   330   335

Leu Lys Arg His Glu His Val Gln Phe Asn Glu Phe Leu Met Met Asp
        340   345   350

Ile Tyr Lys Tyr His Leu Leu Gly His Lys Pro Ser Gln His Asn Pro
     355   360   365

Lys Leu Asn Lys Asn Pro Gly Pro Thr Leu Glu Leu Gln Asp Gly Pro
     370   375   380

Gly Ala Pro Thr Pro Val Leu Asn Gln Pro Gly Ala Pro Lys Thr Gln
385   390   395   400

Ile Phe Met Asn Gly Ala Cys Ser Pro Ser Leu Leu Pro Thr Leu Ser
        405   410   415

Ala Pro Met Pro Phe Pro Leu Pro Val Val Pro Asp Tyr Ser Ser Ser
        420   425   430

Thr Tyr Leu Phe Arg Leu Met Ala Val Val Val His His Gly Asp Met
      435   440   445

His Ser Gly His Phe Val Thr Tyr Arg Arg Ser Pro Pro Ser Ala Arg
     450   455   460

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Asn Pro Leu Ser Thr Ser Asn Gln Trp Leu Trp Val Ser Asp Asp Thr
465             470             475             480

Val Arg Lys Ala Ser Leu Gln Glu Val Leu Ser Ser Ser Ala Tyr Leu
            485             490             495

Leu Phe Tyr Glu Arg Val Leu Ser Arg Met Gln His Gln Ser Gln Glu
            500             505             510

Cys Lys Ser Glu Glu
            515
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<210> 77
<211> 1123
<212> PRT
<213> Homo sapiens

<400> 77

```
Met Asp Leu Gly Pro Gly Asp Ala Ala Gly Gly Gly Pro Leu Ala Pro
 1               5               10              15

Arg Pro Arg Arg Arg Arg Ser Leu Arg Arg Leu Phe Ser Arg Phe Leu
            20              25              30

Leu Ala Leu Gly Ser Arg Ser Arg Pro Gly Asp Ser Pro Pro Arg Pro
            35              40              45

Gln Pro Gly His Cys Asp Gly Asp Gly Glu Gly Gly Phe Ala Cys Ala
        50              55              60

Pro Gly Pro Val Pro Ala Ala Pro Gly Ser Pro Gly Glu Glu Arg Pro
 65              70              75              80

Pro Gly Pro Gln Pro Gln Leu Gln Leu Pro Ala Gly Asp Gly Ala Arg
            85              90              95

Pro Pro Gly Ala Gln Gly Leu Lys Asn His Gly Asn Thr Cys Phe Met
            100             105             110

Asn Ala Val Val Gln Cys Leu Ser Asn Thr Asp Leu Leu Ala Glu Phe
            115             120             125

Leu Ala Leu Gly Arg Tyr Arg Ala Ala Pro Gly Arg Ala Glu Val Thr
            130             135             140

Glu Gln Leu Ala Ala Leu Val Arg Ala Leu Trp Thr Arg Glu Tyr Thr
145             150             155             160

Pro Gln Leu Ser Ala Glu Phe Lys Asn Ala Val Ser Lys Tyr Gly Ser
            165             170             175

Gln Phe Gln Gly Asn Ser Gln His Asp Ala Leu Glu Phe Leu Leu Trp
            180             185             190

Leu Leu Asp Arg Val His Glu Asp Leu Glu Gly Ser Ser Arg Gly Pro
            195             200             205
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Val Ser Glu Lys Leu Pro Pro Glu Ala Thr Lys Thr Ser Glu Asn Cys
    210   215   220

Leu Ser Pro Ser Ala Gln Leu Pro Leu Gly Gln Ser Phe Val Gln Ser
225   230   235   240

His Phe Gln Ala Gln Tyr Arg Ser Ser Leu Thr Cys Pro His Cys Leu
            245   250   255

Lys Gln Ser Asn Thr Phe Asp Pro Phe Leu Cys Val Ser Leu Pro Ile
            260   265   270

Pro Leu Arg Gln Thr Arg Phe Leu Ser Val Thr Leu Val Phe Pro Ser
        275   280   285

Lys Ser Gln Arg Phe Leu Arg Val Gly Leu Ala Val Pro Ile Leu Ser
    290   295   300

Thr Val Ala Ala Leu Arg Lys Met Val Ala Glu Glu Gly Gly Val Pro
305   310   315   320

Ala Asp Glu Val Ile Leu Val Glu Leu Tyr Pro Ser Gly Phe Gln Arg
            325   330   335

Ser Phe Phe Asp Glu Glu Asp Leu Asn Thr Ile Ala Glu Gly Asp Asn
        340   345   350

Val Tyr Ala Phe Gln Val Pro Pro Ser Pro Ser Gln Gly Thr Leu Ser
    355   360   365

Ala His Pro Leu Gly Leu Ser Ala Ser Pro Arg Leu Ala Ala Arg Glu
    370   375   380

Gly Gln Arg Phe Ser Leu Ser Leu His Ser Glu Ser Lys Val Leu Ile
385   390   395   400

Leu Phe Cys Asn Leu Val Gly Ser Gly Gln Gln Ala Ser Arg Phe Gly
            405   410   415

Pro Pro Phe Leu Ile Arg Glu Asp Arg Ala Val Ser Trp Ala Gln Leu
            420   425   430

Gln Gln Ser Ile Leu Ser Lys Val Arg His Leu Met Lys Ser Glu Ala
        435   440   445

Pro Val Gln Asn Leu Gly Ser Leu Phe Ser Ile Arg Val Val Gly Leu
    450   455   460

Ser Val Ala Cys Ser Tyr Leu Ser Pro Lys Asp Ser Arg Pro Leu Cys
465   470   475   480

His Trp Ala Val Asp Arg Val Leu His Leu Arg Arg Pro Gly Gly Pro
            485   490   495

Pro His Val Lys Leu Ala Val Glu Trp Asp Ser Ser Val Lys Glu Arg
            500   505   510

```
Leu Phe Gly Ser Leu Gln Glu Glu Arg Ala Gln Asp Ala Asp Ser Val
        515             520             525

Trp Gln Gln Gln Gln Ala His Gln Gln His Ser Cys Thr Leu Asp Glu
    530             535             540

Cys Phe Gln Phe Tyr Thr Lys Glu Glu Gln Leu Ala Gln Asp Asp Ala
545             550             555             560

Trp Lys Cys Pro His Cys Gln Val Leu Gln Gln Gly Met Val Lys Leu
            565             570             575

Ser Leu Trp Thr Leu Pro Asp Ile Leu Ile Ile His Leu Lys Arg Phe
            580             585             590

Cys Gln Val Gly Glu Arg Arg Asn Lys Leu Ser Thr Leu Val Lys Phe
        595             600             605

Pro Leu Ser Gly Leu Asn Met Ala Pro His Val Ala Gln Arg Ser Thr
    610             615             620

Ser Pro Glu Ala Gly Leu Gly Pro Trp Pro Ser Trp Lys Gln Pro Asp
625             630         -   635             640

Cys Leu Pro Thr Ser Tyr Pro Leu Asp Phe Leu Tyr Asp Leu Tyr Ala
            645             650             655

Val Cys Asn His His Gly Asn Leu Gln Gly Gly His Tyr Thr Ala Tyr
        660             665             670

Cys Arg Asn Ser Leu Asp Gly Gln Trp Tyr Ser Tyr Asp Asp Ser Thr
        675             680             685

Val Glu Pro Leu Arg Glu Asp Glu Val Asn Thr Arg Gly Ala Tyr Ile
    690             695             700

Leu Phe Tyr Gln Lys Arg Asn Ser Ile Pro Pro Trp Ser Ala Ser Ser
705             710             715             720

Ser Met Arg Gly Ser Thr Ser Ser Leu Ser Asp His Trp Leu Leu
            725             730             735

Arg Leu Gly Ser His Ala Gly Ser Thr Arg Gly Ser Leu Leu Ser Trp
            740             745             750

Ser Ser Ala Pro Cys Pro Ser Leu Pro Gln Val Pro Asp Ser Pro Ile
            755             760             765

Phe Thr Asn Ser Leu Cys Asn Gln Glu Lys Gly Gly Leu Glu Pro Arg
    770             775             780

Arg Leu Val Arg Gly Val Lys Gly Arg Ser Ile Ser Met Lys Ala Pro
785             790             795             800

Thr Thr Ser Arg Ala Lys Gln Gly Pro Phe Lys Thr Met Pro Leu Arg
            805             810             815
```

```
Trp Ser Phe Gly Ser Lys Glu Lys Pro Pro Gly Ala Ser Val Glu Leu
            820             825             830

Val Glu Tyr Leu Glu Ser Arg Arg Pro Arg Ser Thr Ser Gln Ser
            835             840             845

Ile Val Ser Leu Leu Thr Gly Thr Ala Gly Glu Asp Glu Lys Ser Ala
        850             855             860

Ser Pro Arg Ser Asn Val Ala Leu Pro Ala Asn Ser Glu Asp Gly Gly
865             870             875             880

Arg Ala Ile Glu Arg Gly Pro Ala Gly Val Pro Cys Pro Ser Ala Gln
                885             890             895

Pro Asn His Cys Leu Ala Pro Gly Asn Ser Asp Gly Pro Asn Thr Ala
            900             905             910

Arg Lys Leu Lys Glu Asn Ala Gly Gln Asp Ile Lys Leu Pro Arg Lys
        915             920             925

Phe Asp Leu Pro Leu Thr Val Met Pro Ser Val Glu His Glu Lys Pro
    930             935             940

Ala Arg Pro Glu Gly Gln Lys Ala Met Asn Trp Lys Glu Ser Phe Gln
945             950             955             960

Met Gly Ser Lys Ser Ser Pro Pro Ser Pro Tyr Met Gly Phe Ser Gly
            965             970             975

Asn Ser Lys Asp Ser Arg Arg Gly Thr Ser Glu Leu Asp Arg Pro Leu
        980             985             990

Gln Gly Thr Leu Thr Leu Leu Arg Ser Val Phe Arg Lys Lys Glu Asn
        995             1000            1005

Arg Arg Asn Glu Arg Ala Glu Val Ser Pro Gln Val Pro Pro Val Ser
    1010            1015            1020

Leu Val Ser Gly Gly Leu Ser Pro Ala Met Asp Gly Gln Ala Pro Gly
1025            1030            1035            1040

Ser Pro Pro Ala Leu Arg Ile Pro Glu Gly Leu Ala Arg Gly Leu Gly
            1045            1050            1055

Ser Arg Leu Glu Arg Asp Val Trp Ser Ala Pro Ser Ser Leu Arg Leu
        1060            1065            1070

Pro Arg Lys Ala Ser Arg Ala Pro Arg Gly Ser Ala Leu Gly Met Ser
        1075            1080            1085

Gln Arg Thr Val Pro Gly Glu Gln Ala Ser Tyr Gly Thr Phe Gln Arg
    1090            1095            1100

Val Lys Tyr His Thr Leu Ser Leu Gly Arg Lys Lys Thr Leu Pro Glu
1105            1110            1115            1120

Ser Ser Phe
```

<210> 78
<211> 261
<212> PRT
<213> Homo sapiens

<400> 78

Met	Gln	Leu	Val	Ile	Leu	Arg	Val	Thr	Ile	Phe	Leu	Pro	Trp	Cys	Phe
1				5					10					15	

Ala	Val	Pro	Val	Pro	Pro	Ala	Ala	Asp	His	Lys	Gly	Trp	Asp	Phe	Val
			20				25					30			

Glu	Gly	Tyr	Phe	His	Gln	Phe	Phe	Leu	Thr	Lys	Lys	Glu	Ser	Pro	Leu
		35					40					45			

Leu	Thr	Gln	Glu	Thr	Gln	Thr	Gln	Leu	Leu	Gln	Gln	Phe	His	Arg	Asn
	50					55					60				

Gly	Thr	Asp	Leu	Leu	Asp	Met	Gln	Met	His	Ala	Leu	Leu	His	Gln	Pro
65					70					75					80

His	Cys	Gly	Val	Pro	Asp	Gly	Ser	Asp	Thr	Ser	Ile	Ser	Pro	Gly	Arg
				85					90					95	

Cys	Lys	Trp	Asn	Lys	His	Thr	Leu	Thr	Tyr	Arg	Ile	Ile	Asn	Tyr	Pro
			100					105					110		

His	Asp	Met	Lys	Pro	Ser	Ala	Val	Lys	Asp	Ser	Ile	Tyr	Asn	Ala	Val
		115					120					125			

Ser	Ile	Trp	Ser	Asn	Val	Thr	Pro	Leu	Ile	Phe	Gln	Gln	Val	Gln	Asn
	130					135					140				

Gly	Asp	Ala	Asp	Ile	Lys	Val	Ser	Phe	Trp	Gln	Trp	Ala	His	Glu	Asp
145					150					155					160

Gly	Trp	Pro	Phe	Asp	Gly	Pro	Gly	Gly	Ile	Leu	Gly	His	Ala	Phe	Leu
			165					170					175		

Pro	Asn	Ser	Gly	Asn	Pro	Gly	Val	Val	His	Phe	Asp	Lys	Asn	Glu	His
			180					185					190		

Trp	Ser	Ala	Ser	Asp	Thr	Gly	Tyr	Asn	Leu	Phe	Leu	Val	Ala	Thr	His
		195					200					205			

Glu	Ile	Gly	His	Ser	Leu	Gly	Leu	Gln	His	Ser	Gly	Asn	Gln	Ser	Ser
	210					215					220				

Ile	Met	Tyr	Pro	Thr	Tyr	Trp	Tyr	His	Asp	Pro	Arg	Thr	Phe	Gln	Leu
225					230					235					240

Ser	Ala	Asp	Asp	Ile	Gln	Arg	Ile	Gln	His	Leu	Tyr	Gly	Glu	Lys	Cys
			245					250					255		

```
Ser Ser Asp Ile Pro
            260


<210> 79
<211> 483
<212> PRT
<213> Homo sapiens

<400> 79
Met Lys Val Leu Pro Ala Ser Gly Leu Ala Val Phe Leu Ile Met Ala
  1               5                  10                  15

Leu Lys Phe Ser Thr Ala Ala Pro Ser Leu Val Ala Ala Ser Pro Arg
            20                  25                  30

Thr Trp Arg Asn Asn Tyr Arg Leu Ala Gln Ala Tyr Leu Asp Lys Tyr
            35                  40                  45

Tyr Thr Asn Lys Glu Gly His Gln Ile Gly Glu Met Val Ala Arg Gly
    50                  55                  60

Ser Asn Ser Met Ile Arg Lys Ile Lys Glu Leu Gln Ala Phe Phe Gly
 65                  70                  75                  80

Leu Gln Val Thr Gly Lys Leu Asp Gln Thr Thr Met Asn Val Ile Lys
                85                  90                  95

Lys Pro Arg Cys Gly Val Pro Asp Val Ala Asn Tyr Arg Leu Phe Pro
            100                 105                 110

Gly Glu Pro Lys Trp Lys Lys Asn Thr Leu Thr Tyr Arg Ile Ser Lys
            115                 120                 125

Tyr Thr Pro Ser Met Ser Ser Val Glu Val Asp Lys Ala Val Glu Met
    130                 135                 140

Ala Leu Gln Ala Trp Ser Ser Ala Val Pro Leu Ser Phe Val Arg Ile
145                 150                 155                 160

Asn Ser Gly Glu Ala Asp Ile Met Ile Ser Phe Glu Asn Gly Asp His
            165                 170                 175

Gly Asp Ser Tyr Pro Phe Asp Gly Pro Arg Gly Thr Leu Ala His Ala
            180                 185                 190

Phe Ala Pro Gly Glu Gly Leu Gly Gly Asp Thr His Phe Asp Asn Pro
            195                 200                 205

Glu Lys Trp Thr Met Gly Thr Asn Gly Phe Asn Leu Phe Thr Val Ala
    210                 215                 220

Ala His Glu Phe Gly His Ala Leu Gly Leu Ala His Ser Thr Asp Pro
225                 230                 235                 240

Ser Ala Leu Met Tyr Pro Thr Tyr Lys Tyr Lys Asn Pro Tyr Gly Phe
                245                 250                 255
```

His Leu Pro Lys Asp Asp Val Lys Gly Ile Gln Ala Leu Tyr Gly Pro
         260   265   270

Arg Lys Val Phe Leu Gly Lys Pro Thr Leu Pro His Ala Pro His His
         275   280   285

Lys Pro Ser Ile Pro Asp Leu Cys Asp Ser Ser Ser Ser Phe Asp Ala
         290   295   300

Val Thr Met Leu Gly Lys Glu Leu Leu Leu Phe Lys Asp Arg Ile Phe
305   310   315   320

Trp Arg Arg Gln Val His Leu Arg Thr Gly Ile Arg Pro Ser Thr Ile
         325   330   335

Thr Ser Ser Phe Pro Gln Leu Met Ser Asn Val Asp Ala Ala Tyr Glu
         340   345   350

Val Ala Glu Arg Gly Thr Ala Tyr Phe Phe Lys Gly Pro His Tyr Trp
         355   360   365

Ile Thr Arg Gly Phe Gln Met Gln Gly Pro Pro Arg Thr Ile Tyr Asp
         370   375   380

Phe Gly Phe Pro Arg His Val Gln Gln Ile Asp Ala Ala Val Tyr Leu
385   390   395   400

Arg Glu Pro Gln Lys Thr Leu Phe Phe Val Gly Asp Glu Tyr Tyr Ser
         405   410   415

Tyr Asp Glu Arg Lys Arg Lys Met Glu Lys Asp Tyr Pro Lys Asn Thr
         420   425   430

Glu Glu Glu Phe Ser Gly Val Asn Gly Gln Ile Asp Ala Ala Val Glu
         435   440   445

Leu Asn Gly Tyr Ile Tyr Phe Phe Ser Gly Pro Lys Thr Tyr Lys Tyr
         450   455   460

Asp Thr Glu Lys Glu Asp Val Val Ser Val Val Lys Ser Ser Ser Trp
465   470   475   480

Ile Gly Cys

<210> 80
<211> 765
<212> PRT
<213> Homo sapiens

<400> 80
Met Asn Val Ala Leu Gln Glu Leu Gly Ala Gly Ser Asn Met Val Glu
  1   5   10   15

Tyr Lys Arg Ala Thr Leu Arg Asp Glu Asp Ala Pro Glu Thr Pro Val
         20   25   30

Glu Gly Gly Ala Ser Pro Asp Ala Met Glu Val Gly Phe Gln Lys Gly
        35   40   45

Thr Arg Gln Leu Leu Gly Ser Arg Thr Gln Leu Glu Leu Val Leu Ala
    50   55   60

Gly Ala Ser Leu Leu Leu Ala Ala Leu Leu Leu Gly Cys Leu Val Ala
65   70   75   80

Leu Gly Val Gln Tyr His Arg Asp Pro Ser His Ser Thr Cys Leu Thr
            85   90   95

Glu Ala Cys Ile Arg Val Ala Gly Lys Ile Leu Glu Ser Leu Asp Arg
            100   105   110

Gly Val Ser Pro Cys Glu Asp Phe Tyr Gln Phe Ser Cys Gly Gly Trp
        115   120   125

Ile Arg Arg Asn Pro Leu Pro Asp Gly Arg Ser Arg Trp Asn Thr Phe
    130   135   140

Asn Ser Leu Trp Asp Gln Asn Gln Ala Ile Leu Lys His Leu Leu Glu
145   150   155   160

Asn Thr Thr Phe Asn Ser Ser Ser Glu Ala Glu Gln Lys Thr Gln Arg
            165   170   175

Phe Tyr Leu Ser Cys Leu Gln Val Glu Arg Ile Glu Glu Leu Gly Ala
        180   185   190

Gln Pro Leu Arg Asp Leu Ile Glu Lys Ile Gly Gly Trp Asn Ile Thr
        195   200   205

Gly Pro Trp Asp Gln Asp Asn Phe Met Glu Val Leu Lys Ala Val Ala
    210   215   220

Gly Thr Tyr Arg Ala Thr Pro Phe Phe Thr Val Tyr Ile Ser Ala Asp
225   230   235   240

Ser Lys Ser Ser Asn Ser Asn Val Ile Gln Val Asp Gln Ser Gly Leu
            245   250   255

Phe Leu Pro Ser Arg Asp Tyr Tyr Leu Asn Arg Thr Ala Asn Glu Lys
        260   265   270

Val Leu Thr Ala Tyr Leu Asp Tyr Met Glu Glu Leu Gly Met Leu Leu
    275   280   285

Gly Gly Arg Pro Thr Ser Thr Arg Glu Gln Met Gln Gln Val Leu Glu
    290   295   300

Leu Glu Ile Gln Leu Ala Asn Ile Thr Val Pro Gln Asp Gln Arg Arg
305   310   315   320

Asp Glu Glu Lys Ile Tyr His Lys Met Ser Ile Ser Glu Leu Gln Ala
            325   330   335

```
Leu Ala Pro Ser Met Asp Trp Leu Glu Phe Leu Ser Phe Leu Leu Ser
            340         345             350

Pro Leu Glu Leu Ser Asp Ser Glu Pro Val Val Val Tyr Gly Met Asp
        355         360             365

Tyr Leu Gln Gln Val Ser Glu Leu Ile Asn Arg Thr Glu Pro Ser Ile
    370             375         380

Leu Asn Asn Tyr Leu Ile Trp Asn Leu Val Gln Lys Thr Thr Ser Ser
385             390             395                 400

Leu Asp Arg Arg Phe Glu Ser Ala Gln Glu Lys Leu Leu Glu Thr Leu
            405             410             415

Tyr Gly Thr Lys Lys Ser Cys Val Pro Arg Trp Gln Thr Cys Ile Ser
        420             425             430

Asn Thr Asp Asp Ala Leu Gly Phe Ala Leu Gly Ser Leu Phe Val Lys
        435             440             445

Ala Thr Phe Asp Arg Gln Ser Lys Glu Ile Ala Glu Gly Met Ile Ser
    450             455             460

Glu Ile Arg Thr Ala Phe Glu Glu Ala Leu Gly Gln Leu Val Trp Met
465             470             475                 480

Asp Glu Lys Thr Arg Gln Ala Ala Lys Glu Lys Ala Asp Ala Ile Tyr
            485             490             495

Asp Met Ile Gly Phe Pro Asp Phe Ile Leu Glu Pro Lys Glu Leu Asp
        500             505             510

Asp Val Tyr Asp Gly Tyr Glu Ile Ser Glu Asp Ser Phe Phe Gln Asn
        515             520             525

Met Leu Asn Leu Tyr Asn Phe Ser Ala Lys Val Met Ala Asp Gln Leu
    530             535             540

Arg Lys Pro Pro Ser Arg Asp Gln Trp Ser Met Thr Pro Gln Thr Val
545             550             555                 560

Asn Ala Tyr Tyr Leu Pro Thr Lys Asn Glu Ile Val Phe Pro Ala Gly
            565             570             575

Ile Leu Gln Ala Pro Phe Tyr Ala Arg Asn His Pro Lys Ala Leu Asn
            580             585             590

Phe Gly Gly Ile Gly Val Val Met Gly His Glu Leu Thr His Ala Phe
        595             600             605

Asp Asp Gln Gly Arg Glu Tyr Asp Lys Glu Gly Asn Leu Arg Pro Trp
    610             615             620

Trp Gln Asn Glu Ser Leu Ala Ala Phe Arg Asn His Thr Ala Cys Met
625             630             635                 640
```

Glu Glu Gln Tyr Asn Gln Tyr Gln Val Asn Gly Glu Arg Leu Asn Gly
                645   650   655

Arg Gln Thr Leu Gly Glu Asn Ile Ala Asp Asn Gly Gly Leu Lys Ala
            660   665   670

Ala Tyr Asn Ala Tyr Lys Ala Trp Leu Arg Lys His Gly Glu Glu Gln
        675   680   685

Gln Leu Pro Ala Val Gly Leu Thr Asn His Gln Leu Phe Phe Val Gly
    690   695   700

Phe Ala Gln Val Trp Cys Ser Val Arg Thr Pro Glu Ser Ser His Glu
705   710   715   720

Gly Leu Val Thr Asp Pro His Ser Pro Ala Arg Phe Arg Val Leu Gly
            725   730   735

Thr Leu Ser Asn Ser Arg Asp Phe Leu Arg His Phe Gly Cys Pro Val
            740   745   750

Gly Ser Pro Met Asn Pro Gly Gln Leu Cys Glu Val Trp
        755   760   765

<210> 81
<211> 419
<212> PRT
<213> Homo sapiens

<400> 81
Met Pro Glu Lys Arg Pro Phe Glu Arg Leu Pro Ala Asp Val Ser Pro
  1   5   10   15

Ile Asn Cys Ser Leu Cys Leu Lys Pro Asp Leu Leu Asp Phe Thr Phe
            20   25   30

Glu Gly Lys Leu Glu Ala Ala Ala Gln Val Arg Gln Ala Thr Asn Gln
        35   40   45

Ile Val Met Asn Cys Ala Asp Ile Asp Ile Ile Thr Ala Ser Tyr Ala
    50   55   60

Pro Glu Gly Asp Glu Glu Ile His Ala Thr Gly Phe Asn Tyr Gln Asn
65   70   75   80

Glu Asp Glu Lys Val Thr Leu Ser Phe Pro Ser Thr Leu Gln Thr Gly
            85   90   95

Thr Gly Thr Leu Lys Ile Asp Phe Val Gly Glu Leu Asn Asp Lys Met
        100   105   110

Lys Gly Phe Tyr Arg Ser Lys Tyr Thr Thr Pro Ser Gly Glu Val Arg
        115   120   125

Tyr Ala Ala Val Thr Gln Phe Glu Ala Thr Asp Ala Arg Arg Ala Phe
    130   135   140

```
Pro Cys Trp Asp Glu Arg Ala Ile Lys Ala Thr Phe Asp Ile Ser Leu
145             150             155             160

Val Val Pro Lys Asp Arg Val Ala Leu Ser Asn Met Asn Val Ile Asp
            165             170             175

Arg Lys Pro Tyr Pro Asp Asp Glu Asn Leu Val Glu Val Lys Phe Ala
            180             185             190

Arg Thr Pro Val Thr Ser Thr Tyr Leu Val Ala Phe Val Val Gly Glu
            195             200             205

Tyr Asp Phe Val Glu Thr Arg Ser Lys Asp Gly Val Cys Val Cys Val
    210             215             220

Tyr Thr Pro Val Gly Lys Ala Glu Gln Gly Lys Phe Ala Leu Glu Val
225             230             235             240

Ala Ala Lys Thr Leu Pro Phe Tyr Asn Asp Tyr Phe Asn Val Pro Tyr
            245             250             255

Pro Leu Pro Lys Ile Asp Leu Ile Ala Ile Ala Asp Phe Ala Ala Gly
            260             265             270

Ala Met Glu Asn Trp Asp Leu Val Thr Tyr Arg Glu Thr Ala Leu Leu
        275             280             285

Ile Asp Pro Lys Asn Ser Cys Ser Ser Ser Arg Gln Trp Val Ala Leu
    290             295             300

Val Val Gly His Glu Leu Ala His Gln Trp Phe Gly Asn Leu Val Thr
305             310             315             320

Met Glu Trp Trp Thr His Leu Trp Leu Asn Glu Gly Phe Ala Ser Trp
            325             330             335

Ile Glu Tyr Leu Cys Val Asp His Cys Phe Pro Glu Tyr Asp Ile Trp
        340             345             350

Thr Gln Phe Val Ser Ala Asp Tyr Thr Arg Ala Gln Glu Leu Asp Ala
        355             360             365

Leu Asp Asn Ser His Pro Ile Glu Val Ser Val Gly His Pro Ser Glu
    370             375             380

Val Asp Glu Ile Phe Asp Ala Ile Ser Tyr Ser Lys Gly Ala Ser Val
385             390             395             400

Ile Arg Met Leu His Asp Tyr Ile Gly Asp Lys Val Lys Lys Lys Thr
            405             410             415

Leu Ser Ile
```

<210> 82
<211> 755
<212> PRT

<213> Homo sapiens

<400> 82
```
Met Arg Pro Ala Pro Ile Ala Leu Trp Leu Arg Leu Val Leu Ala Leu
 1               5                  10                  15

Ala Leu Val Arg Pro Arg Ala Val Gly Trp Ala Pro Val Arg Ala Pro
            20                  25                  30

Ile Tyr Val Ser Ser Trp Ala Val Gln Val Ser Gln Gly Asn Arg Glu
        35                  40                  45

Val Glu Arg Leu Ala Arg Lys Phe Gly Phe Val Asn Leu Gly Pro Ile
        50                  55                  60

Phe Pro Asp Gly Gln Tyr Phe His Leu Arg His Arg Gly Val Val Gln
65                  70                  75                  80

Gln Ser Leu Thr Pro His Trp Gly His His Leu His Leu Lys Lys Asn
                85                  90                  95

Pro Lys Val Gln Trp Phe Gln Gln Gln Thr Leu Gln Arg Arg Val Lys
            100                 105                 110

Arg Ser Val Val Val Pro Thr Asp Pro Trp Phe Ser Lys Gln Trp Tyr
        115                 120                 125

Met Asn Ser Glu Ala Gln Pro Asp Leu Ser Ile Leu Gln Ala Trp Ser
    130                 135                 140

Gln Gly Leu Ser Gly Gln Gly Ile Val Val Ser Val Leu Asp Asp Gly
145                 150                 155                 160

Ile Glu Lys Asp His Pro Asp Leu Trp Ala Asn Tyr Asp Pro Leu Ala
                165                 170                 175

Ser Tyr Asp Phe Asn Asp Tyr Asp Pro Asp Pro Gln Pro Arg Tyr Thr
            180                 185                 190

Pro Ser Lys Glu Asn Arg His Gly Thr Arg Cys Ala Gly Glu Val Ala
            195                 200                 205

Ala Met Ala Asn Asn Gly Phe Cys Gly Val Gly Val Ala Phe Asn Ala
    210                 215                 220

Arg Ile Gly Gly Val Arg Met Leu Asp Gly Thr Ile Thr Asp Val Ile
225                 230                 235                 240

Glu Ala Gln Ser Leu Ser Leu Gln Pro Gln His Ile His Ile Tyr Ser
            245                 250                 255

Ala Ser Trp Gly Pro Glu Asp Asp Gly Arg Thr Val Asp Gly Pro Gly
            260                 265                 270

Ile Leu Thr Arg Glu Ala Phe Arg Arg Gly Val Thr Lys Gly Arg Gly
        275                 280                 285
```

Gly Leu Gly Thr Leu Phe Ile Trp Ala Ser Gly Asn Gly Gly Leu His
    290   295   300

Tyr Asp Asn Cys Asn Cys Asp Gly Tyr Thr Asn Ser Ile His Thr Leu
305   310   315   320

Ser Val Gly Ser Thr Thr Gln Gln Gly Arg Val Pro Trp Tyr Ser Glu
            325   330   335

Ala Cys Ala Ser Thr Leu Thr Thr Thr Tyr Ser Ser Gly Val Ala Thr
            340   345   350

Asp Pro Gln Ile Val Thr Thr Asp Leu His His Gly Cys Thr Asp Gln
    355   360   365

His Thr Gly Thr Ser Ala Ser Ala Pro Leu Ala Ala Gly Met Ile Ala
    370   375   380

Leu Ala Leu Glu Ala Asn Pro Phe Leu Thr Trp Arg Asp Met Gln His
385   390   395   400

Leu Val Val Arg Ala Ser Lys Pro Ala His Leu Gln Ala Glu Asp Trp
            405   - 410   415

Arg Thr Asn Gly Val Gly Arg Gln Val Ser His His Tyr Gly Tyr Gly
            420   425   430

Leu Leu Asp Ala Gly Leu Leu Val Asp Thr Ala Arg Thr Trp Leu Pro
            435   440   445

Thr Gln Pro Gln Arg Lys Cys Ala Val Arg Val Gln Ser Arg Pro Thr
    450   455   460

Pro Ile Leu Pro Leu Ile Tyr Ile Arg Glu Asn Val Ser Ala Cys Ala
465   470   475   480

Gly Leu His Asn Ser Ile Arg Ser Leu Glu His Val Gln Ala Gln Leu
            485   490   495

Thr Leu Ser Tyr Ser Arg Arg Gly Asp Leu Glu Ile Ser Leu Thr Ser
            500   505   510

Pro Met Gly Thr Arg Ser Thr Leu Val Ala Ile Arg Pro Leu Asp Val
    515   520   525

Ser Thr Glu Gly Tyr Asn Asn Trp Val Phe Met Ser Thr His Phe Trp
    530   535   540

Asp Glu Asn Pro Gln Gly Val Trp Thr Leu Gly Leu Glu Asn Lys Gly
545   550   555   560

Tyr Tyr Phe Asn Thr Gly Thr Leu Tyr Arg Tyr Thr Leu Leu Leu Tyr
            565   570   575

Gly Thr Ala Glu Asp Met Thr Ala Arg Pro Thr Gly Pro Gln Val Thr
            580   585   590

```
Ser Ser Ala Cys Val Gln Arg Asp Thr Glu Gly Leu Cys Gln Ala Cys
        595                 600             605

Asp Gly Pro Ala Tyr Ile Leu Gly Gln Leu Cys Leu Ala Tyr Cys Pro
    610             615             620

Pro Arg Phe Phe Asn His Thr Arg Leu Val Thr Ala Gly Pro Gly His
625             630             635             640

Thr Ala Ala Pro Ala Leu Arg Val Cys Ser Ser Cys His Ala Ser Cys
            645             650             655

Tyr Thr Cys Arg Gly Gly Ser Pro Arg Asp Cys Thr Ser Cys Pro Pro
            660             665             670

Ser Ser Thr Leu Asp Gln Gln Gln Gly Ser Cys Met Gly Pro Thr Thr
        675             680             685

Pro Asp Ser Arg Pro Arg Leu Arg Ala Ala Ala Cys Pro His His Arg
    690             695             700

Cys Pro Ala Ser Ala Met Val Leu Ser Leu Leu Ala Val Thr Leu Gly
705             710             715             720

Gly Pro Val Leu Cys Gly Met Ser Met Asp Leu Pro Leu Tyr Ala Trp
            725             730             735

Leu Ser Arg Ala Arg Ala Thr Pro Thr Lys Pro Gln Val Trp Leu Pro
            740             745             750

Ala Gly Thr
        755
```

```
<210> 83
<211> 391
<212> PRT
<213> Homo sapiens

<400> 83
Gly Pro Gly Arg Gln Gly Gly Cys Ala Gly Arg Arg Ser Thr Ala Leu
    1           5           10              15

Pro Leu Arg Ala Pro Leu Arg Ala Arg Arg Pro Gly Pro Arg Ser Glu
            20          25              30

Arg Met Gly Ala Ala Thr Cys Arg Gly Ser Arg Ile Pro Ser Gly Pro
        35              40              45

Pro Val Gln Gly Glu Arg Ser Ala Pro Arg Phe Gly Val Thr Ser Leu
    50              55              60

Ser Leu Trp Pro Ala Asp Phe Lys Asp Asn Trp Arg Ile Ala Gly Ser
65              70              75              80

Arg Gln Glu Val Ala Leu Ala Gly Glu Pro Ala Asp Gln Gln Gln Thr
                85              90              95
```

His Leu Arg Arg Leu Pro Tyr Arg Gln Thr Leu Gly Tyr Lys Glu Asp
            100   105   110

Thr Thr Asn Pro Val Cys Gly Glu Pro Trp Trp Ser Glu Asp Leu Glu
            115   120   125

Met Thr Arg His Trp Pro Trp Glu Val Ser Leu Arg Met Glu Asn Glu
    130   135   140

His Val Cys Gly Gly Ala Leu Ile Asp Pro Ser Trp Val Val Thr Ala
145   150   155   160

Ala His Cys Ser Gln Gly Thr Lys Glu Tyr Ser Val Val Leu Gly Thr
                165   170   175

Ser Lys Leu Gln Pro Met Asn Phe Ser Arg Ala Leu Trp Val Pro Val
            180   185   190

Arg Asp Ile Ile Met His Pro Lys Tyr Trp Gly Arg Ala Phe Ile Met
    195   200   205

Gly Asp Val Ala Leu Val His Leu Gln Thr Pro Val Thr Phe Ser Glu
    210   215   220

Tyr Val Gln Pro Ile Cys Leu Pro Glu Pro Asn Phe Asn Leu Lys Val
225   230   235   240

Gly Thr Gln Cys Trp Val Thr Gly Trp Ser Gln Val Lys Gln Arg Phe
                245   250   255

Ser Gly Ser Thr Ala Asn Ser Met Leu Thr Pro Glu Leu Gln Glu Ala
                260   265   270

Glu Val Phe Ile Met Asp Asn Lys Arg Cys Asp Arg His Tyr Lys Lys
        275   280   285

Ser Phe Phe Pro Pro Val Val Pro Leu Val Leu Gly Asp Met Ile Cys
        290   295   300

Ala Thr Asn Tyr Gly Glu Asn Leu Cys Tyr Gly Asp Ser Gly Gly Pro
305   310   315   320

Leu Ala Cys Glu Val Glu Gly Arg Trp Ile Leu Ala Gly Val Leu Ser
                325   330   335

Trp Glu Lys Ala Cys Val Lys Ala Gln Asn Pro Gly Val Tyr Thr Arg
            340   345   350

Ile Thr Lys Tyr Thr Lys Trp Ile Lys Lys Gln Met Ser Asn Gly Ala
            355   360   365

Phe Ser Gly Pro Cys Ala Ser Ala Cys Leu Leu Phe Leu Cys Trp Pro
    370   375   380

Leu Gln Pro Gln Met Gly Ser
385   390

```
<210> 84
<211> 227
<212> PRT
<213> Homo sapiens

<400> 84
Ile Leu Thr Pro Val Cys Gly Arg Thr Pro Leu Arg Ile Val Gly Gly
 1               5                  10                  15

Val Asp Ala Glu Glu Gly Arg Trp Pro Trp Gln Val Ser Val Arg Thr
                20                  25                  30

Lys Gly Arg His Ile Cys Gly Gly Thr Leu Val Thr Ala Thr Trp Val
            35                  40                  45

Leu Thr Ala Gly His Cys Ile Ser Ser Arg Phe His Tyr Ser Val Lys
        50                  55                  60

Met Gly Asp Arg Ser Val Tyr Asn Glu Asn Thr Ser Val Val Val Ser
65                  70                  75                  80

Val Gln Arg Ala Phe Val His Pro Lys Phe Ser Thr Val Thr Thr Ile
                85                  90                  95

Arg Asn Asp Leu Ala Leu Leu Gln Leu Gln His Pro Val Asn Phe Thr
            100                 105                 110

Ser Asn Ile Gln Pro Ile Cys Ile Pro Gln Glu Asn Phe Gln Val Glu
            115                 120                 125

Gly Arg Thr Arg Cys Trp Val Thr Gly Trp Gly Lys Thr Pro Glu Arg
        130                 135                 140

Gly Glu Lys Leu Ala Ser Glu Ile Leu Gln Asp Val Asp Gln Tyr Ile
145                 150                 155                 160

Met Cys Tyr Glu Glu Cys Asn Lys Ile Ile Gln Lys Ala Leu Ser Ser
                165                 170                 175

Thr Lys Asp Val Ile Ile Lys Gly Met Val Cys Gly Tyr Lys Glu Gln
                180                 185                 190

Gly Lys Asp Ser Cys Gln Gly Asp Ser Gly Gly Arg Leu Ala Cys Glu
            195                 200                 205

Tyr Asn Asp Thr Trp Val Gln Val Gly Ile Val Ser Trp Gly Ile Gly
210                 215                 220

Cys Gly Arg
225


<210> 85
<211> 296
<212> PRT
<213> Homo sapiens
```

<400> 85

```
Met Gly Ala Arg Gly Ala Leu Leu Leu Ala Leu Leu Leu Ala Arg Ala
 1               5                  10                  15

Gly Leu Gly Lys Pro Glu Ala Cys Gly His Arg Glu Ile His Ala Leu
             20              25                  30

Val Ala Gly Gly Val Glu Ser Ala Arg Gly Arg Trp Pro Trp Gln Ala
         35              40                  45

Ser Leu Arg Leu Arg Arg Arg His Arg Cys Gly Gly Ser Leu Leu Ser
     50              55                  60

Arg Arg Trp Val Leu Ser Ala Ala His Cys Phe Gln Lys His Tyr Tyr
 65              70                  75                      80

Pro Ser Glu Trp Thr Val Gln Leu Gly Glu Leu Thr Ser Arg Pro Thr
             85                  90                      95

Pro Trp Asn Leu Arg Ala Tyr Ser Ser Arg Tyr Lys Val Gln Asp Ile
            100             105                 110

Ile Val Asn Pro Asp Ala Leu Gly Val Leu Arg Asn Asp Ile Ala Leu
        115             120                 125

Leu Arg Leu Ala Ser Ser Val Thr Tyr Asn Ala Tyr Ile Gln Pro Ile
    130             135                 140

Cys Ile Glu Ser Ser Thr Phe Asn Phe Val His Arg Pro Asp Cys Trp
145             150                 155                     160

Val Thr Gly Trp Gly Leu Ile Ser Pro Ser Gly Thr Pro Leu Pro Pro
            165                 170                     175

Pro Tyr Asn Leu Arg Glu Ala Gln Val Thr Ile Leu Asn Asn Thr Arg
            180             185                 190

Cys Asn Tyr Leu Phe Glu Gln Pro Ser Ser Arg Ser Met Ile Trp Asp
            195             200                 205

Ser Met Phe Cys Ala Gly Ala Glu Asp Gly Ser Val Asp Thr Cys Lys
    210             215                 220

Gly Asp Ser Gly Gly Pro Leu Val Cys Asp Lys Asp Gly Leu Trp Tyr
225             230             235                     240

Gln Val Gly Ile Val Ser Trp Gly Met Asp Cys Gly Gln Pro Asn Arg
            245             250                 255

Pro Gly Val Tyr Thr Asn Ile Ser Val Tyr Phe His Trp Ile Arg Arg
            260             265                 270

Val Met Ser His Ser Thr Pro Arg Pro Asn Pro Ser Gln Leu Leu Leu
    275             280                 285

Leu Leu Ala Leu Leu Trp Ala Pro
    290             295
```

<210> 86
<211> 628
<212> PRT
<213> Homo sapiens

<400> 86
```
Met Gly Ser Thr Trp Gly Ser Pro Gly Trp Val Arg Leu Ala Leu Cys
 1               5                  10                   15

Leu Thr Gly Leu Val Leu Ser Leu Tyr Ala Leu His Val Lys Ala Ala
             20              25                  30

Arg Ala Arg Asp Arg Asp Tyr Arg Ala Leu Cys Asp Val Gly Thr Ala
         35                  40                  45

Ile Ser Cys Ser Arg Val Phe Ser Ser Arg Trp Gly Arg Gly Phe Gly
     50                  55                  60

Leu Val Glu His Val Leu Gly Gln Asp Ser Ile Leu Asn Gln Ser Asn
65                  70                  75                  80

Ser Ile Phe Gly Cys Ile Phe Tyr Thr Leu Gln Leu Leu Leu Gly Leu
             85                  90                  95

Gln Ala Ala Gln Arg Ala Cys Gly Gln Arg Gly Pro Gly Pro Pro Lys
            100                 105                 110

Pro Gln Glu Gly Asn Thr Val Pro Gly Glu Trp Pro Trp Gln Ala Ser
            115                 120                 125

Val Arg Arg Gln Gly Ala His Ile Cys Ser Gly Ser Leu Val Ala Asp
    130                 135                 140

Thr Trp Val Leu Thr Ala Ala His Cys Phe Glu Lys Ala Ala Ala Thr
145                 150                 155                 160

Glu Leu Asn Ser Trp Ser Val Val Leu Gly Ser Leu Gln Arg Glu Gly
            165                 170                 175

Leu Ser Pro Gly Ala Glu Glu Val Gly Val Ala Ala Leu Gln Leu Pro
            180                 185                 190

Arg Ala Tyr Asn His Tyr Ser Gln Gly Ser Asp Leu Ala Leu Leu Gln
        195                 200                 205

Leu Ala His Pro Thr Thr His Thr Pro Leu Cys Leu Pro Gln Pro Ala
210                 215                 220

His Arg Phe Pro Phe Gly Ala Ser Cys Trp Ala Thr Gly Trp Asp Gln
225                 230                 235                 240

Asp Thr Ser Asp Ala Pro Gly Thr Leu Arg Asn Leu Arg Leu Arg Leu
            245                 250                 255

Ile Ser Arg Pro Thr Cys Asn Cys Ile Tyr Asn Gln Leu His Gln Arg
            260                 265                 270
```

His Leu Ser Asn Pro Ala Arg Pro Gly Met Leu Cys Gly Gly Pro Gln
        275   280   285

Pro Gly Val Gln Gly Pro Cys Gln Gly Asp Ser Gly Gly Pro Val Leu
        290   295   300

Cys Leu Glu Pro Asp Gly His Trp Val Gln Ala Gly Ile Ile Ser Phe
305   310   315   320

Ala Ser Ser Cys Ala Gln Glu Asp Ala Pro Val Leu Leu Thr Asn Thr
                325   330   335

Ala Ala His Ser Ser Trp Leu Gln Ala Arg Val Gln Gly Ala Ala Phe
                340   345   350

Leu Ala Gln Ser Pro Glu Thr Pro Glu Met Ser Asp Glu Asp Ser Cys
        355   360   365

Val Ala Cys Gly Ser Leu Arg Thr Ala Gly Pro Gln Ala Gly Ala Pro
        370   375   380

Ser Pro Trp Pro Trp Glu Ala Arg Leu Met His Gln Gly Gln Leu Ala
385   390   395   400

Cys Gly Gly Ala Leu Val Ser Glu Glu Ala Val Leu Thr Ala Ala His
                405   410   415

Cys Phe Ile Gly Arg Gln Ala Pro Glu Glu Trp Ser Val Gly Leu Gly
                420   425   430

Thr Arg Pro Glu Glu Trp Gly Leu Lys Gln Leu Ile Leu His Gly Ala
        435   440   445

Tyr Thr His Pro Glu Gly Gly Tyr Asp Met Ala Leu Leu Leu Leu Ala
        450   455   460

Gln Pro Val Thr Leu Gly Ala Ser Leu Arg Pro Leu Cys Leu Pro Tyr
465   470   475   480

Pro Asp His His Leu Pro Asp Gly Glu Arg Gly Trp Val Leu Gly Arg
                485   490   495

Ala Arg Pro Gly Ala Gly Ile Ser Ser Leu Gln Thr Val Pro Val Thr
                500   505   510

Leu Leu Gly Pro Arg Ala Cys Ser Arg Leu His Ala Ala Pro Gly Gly
        515   520   525

Asp Gly Ser Pro Ile Leu Pro Gly Met Val Cys Thr Ser Ala Val Gly
        530   535   540

Glu Leu Pro Ser Cys Glu Gly Leu Ser Gly Ala Pro Leu Val His Glu
545   550   555   560

Val Arg Gly Thr Trp Phe Leu Ala Gly Leu His Ser Phe Gly Asp Ala
                565   570   575

Cys Gln Gly Pro Ala Arg Pro Ala Val Phe Thr Ala Leu Pro Ala Tyr
            580   585   590

Glu Asp Trp Val Ser Ser Leu Asp Trp Gln Val Tyr Phe Ala Glu Glu
        595   600   605

Pro Glu Pro Glu Ala Glu Pro Gly Ser Cys Leu Ala Asn Ile Ser Gln
    610   615   620

Pro Thr Ser Cys
625

<210> 87
<211> 276
<212> PRT
<213> Homo sapiens

<400> 87
Met Arg Ala Pro His Leu His Leu Ser Ala Ala Ser Gly Ala Arg Ala
  1   5   10   15

Leu Ala Lys Leu Leu Pro Leu Leu Met Ala Gln Leu Trp Ala Ala Glu
            20   25   30

Ala Ala Leu Leu Pro Gln Asn Asp Thr Arg Leu Asp Pro Glu Ala Tyr
            35   40   45

Gly Ala Pro Cys Ala Arg Gly Ser Gln Pro Trp Gln Val Ser Leu Phe
        50   55   60

Asn Gly Leu Ser Phe His Cys Ala Gly Val Leu Val Asp Gln Ser Trp
 65   70   75   80

Val Leu Thr Ala Ala His Cys Gly Asn Lys Pro Leu Trp Ala Arg Val
                85   90   95

Gly Asp Asp His Leu Leu Leu Leu Gln Gly Glu Gln Leu Arg Arg Thr
            100   105   110

Thr Arg Ser Val Val His Pro Lys Tyr His Gln Gly Ser Gly Pro Ile
        115   120   125

Leu Pro Arg Arg Thr Asp Glu His Asp Leu Met Leu Leu Lys Leu Ala
    130   135   140

Arg Pro Val Val Pro Gly Pro Arg Val Arg Ala Leu Gln Leu Pro Tyr
145   150   155   160

Arg Cys Ala Gln Pro Gly Asp Gln Cys Gln Val Ala Gly Trp Gly Thr
                165   170   175

Thr Ala Ala Arg Arg Val Lys Tyr Asn Lys Gly Leu Thr Cys Ser Ser
            180   185   190

Ile Thr Ile Leu Ser Pro Lys Glu Cys Glu Val Phe Tyr Pro Gly Val
        195   200   205

```
Val Thr Asn Asn Met Ile Cys Ala Gly Leu Asp Arg Gly Gln Asp Pro
    210             215             220
```

```
Cys Gln Ser Asp Ser Gly Gly Pro Leu Val Cys Asp Glu Thr Leu Gln
225             230             235             240
```

```
Gly Ile Leu Ser Trp Gly Val Tyr Pro Cys Gly Ser Ala Gln His Pro
                245             250             255
```

```
Ala Val Tyr Thr Gln Ile Cys Lys Tyr Met Ser Trp Ile Asn Lys Val
            260             265             270
```

```
Ile Arg Ser Asn
        275
```

```
<210> 88
<211> 285
<212> PRT
<213> Homo sapiens
```

```
<400> 88
Asn Val Gln Cys Gly His Arg Pro Ala Phe Pro Asn Ser Ser Trp Leu
  1           5               10              15
```

```
Pro Phe His Glu Arg Leu Gln Val Gln Asn Gly Glu Cys Pro Trp Gln
            20              25              30
```

```
Val Ser Ile Gln Met Ser Arg Lys His Leu Cys Gly Gly Ser Ile Leu
        35              40              45
```

```
His Trp Trp Trp Val Leu Thr Ala Ala His Cys Phe Arg Arg Thr Leu
        50              55              60
```

```
Leu Asp Met Ala Val Val Asn Val Thr Val Val Met Gly Thr Arg Thr
 65             70              75              80
```

```
Phe Ser Asn Ile His Ser Glu Arg Lys Gln Val Gln Lys Val Ile Ile
                85              90              95
```

```
His Lys Tyr Tyr Lys Pro Pro Gln Leu Asp Ser Asp Leu Ser Leu Leu
            100             105             110
```

```
Leu Leu Ala Thr Pro Val Gln Phe Ser Asn Phe Lys Met Pro Val Cys
        115             120             125
```

```
Leu Gln Glu Glu Glu Arg Thr Trp Asp Trp Cys Trp Met Ala Gln Trp
    130             135             140
```

```
Val Thr Thr Asn Gly Tyr Asp Gln Tyr Asp Asp Leu Asn Met His Leu
145             150             155             160
```

```
Glu Lys Leu Arg Val Val Gln Ile Ser Arg Lys Glu Cys Ala Lys Arg
                165             170             175
```

```
Val Asn Gln Leu Ser Arg Asn Met Ile Cys Ala Trp Asn Glu Pro Gly
            180             185             190
```

Thr Asn Gly Gln Gly Pro Gly Glu Val Gly Gly Pro Leu Val Cys Gln
        195   200   205

Lys Lys Asn Lys Ser Thr Trp Tyr Gln Leu Gly Ile Ile Ser Trp Gly
    210   215   220

Val Gly Cys Gly Gln Lys Asn Met Pro Gly Val Tyr Thr Glu Leu Ser
225   230   235   240

Asn Tyr Leu Leu Trp Ile Glu Arg Lys Thr Val Leu Ala Gly Lys Pro
            245   250   255

Tyr Lys Tyr Glu Pro Asp Ser Val Tyr Ala Leu Leu Leu Ser Pro Trp
            260   265   270

Ala Ile Leu Leu Leu Tyr Phe Val Met Leu Leu Leu Ser
        275   280   285

<210> 89
<211> 413
<212> PRT
<213> Homo sapiens

<400> 89
Met Glu Asn Met Leu Leu Trp Leu Ile Phe Phe Thr Pro Gly Trp Thr
  1   5   10   15

Leu Ile Asp Gly Ser Glu Met Glu Trp Asp Phe Met Trp His Leu Arg
            20   25   30

Lys Val Pro Arg Ile Val Ser Glu Arg Thr Phe His Leu Thr Ser Pro
        35   40   45

Ala Phe Glu Ala Asp Ala Lys Met Met Val Asn Thr Val Cys Gly Ile
        50   55   60

Glu Cys Gln Lys Glu Leu Pro Thr Pro Ser Leu Ser Glu Leu Glu Asp
 65   70   75   80

Tyr Leu Ser Tyr Glu Thr Val Phe Glu Asn Gly Thr Arg Thr Leu Thr
                85   90   95

Arg Val Lys Val Gln Asp Leu Val Leu Glu Pro Thr Gln Asn Ile Thr
            100   105   110

Thr Lys Gly Val Ser Val Arg Arg Lys Arg Gln Val Tyr Gly Thr Asp
        115   120   125

Ser Arg Phe Ser Ile Leu Asp Lys Arg Phe Leu Thr Asn Phe Pro Phe
    130   135   140

Ser Thr Ala Val Lys Leu Ser Thr Gly Cys Ser Gly Ile Leu Ile Ser
145   150   155   160

Pro Gln His Val Leu Thr Ala Ala His Cys Val His Asp Gly Lys Asp
            165   170   175

```
Tyr Val Lys Gly Ser Lys Lys Leu Arg Val Gly Leu Leu Lys Met Arg
            180                 185                 190

Asn Lys Ser Gly Gly Lys Lys Arg Arg Gly Ser Lys Arg Ser Arg Arg
            195                 200                 205

Glu Ala Ser Gly Gly Asp Gln Arg Glu Gly Thr Arg Glu His Leu Pro
    210                 215                 220

Glu Arg Ala Lys Gly Gly Arg Arg Arg Lys Lys Ser Gly Arg Gly Gln
225                 230                 235                 240

Arg Ile Ala Glu Gly Arg Pro Ser Phe Gln Trp Thr Arg Val Lys Asn
            245                 250                 255

Thr His Ile Pro Lys Gly Trp Ala Arg Gly Gly Met Gly Asp Ala Thr
            260                 265                 270

Leu Asp Tyr Asp Tyr Ala Leu Leu Glu Leu Lys Arg Ala His Lys Lys
            275                 280                 285

Lys Tyr Met Glu Leu Gly Ile Ser Pro Thr Ile Lys Lys Met Pro Gly
            290                 295       -         300

Gly Met Ile His Phe Ser Gly Phe Asp Asn Asp Arg Ala Asp Gln Leu
305                 310                 315                 320

Val Tyr Arg Phe Cys Ser Val Ser Asp Glu Ser Asn Asp Leu Leu Tyr
            325                 330                 335

Gln Tyr Cys Asp Ala Glu Ser Gly Ser Thr Gly Ser Gly Val Tyr Leu
            340                 345                 350

Arg Leu Lys Asp Pro Asp Lys Lys Asn Trp Lys Arg Lys Ile Ile Ala
            355                 360                 365

Val Tyr Ser Gly His Gln Trp Val Asp Val His Gly Val Gln Lys Asp
    370                 375                 380

Tyr Asn Val Ala Val Arg Ile Thr Pro Leu Lys Tyr Ala Gln Ile Cys
385                 390                 395                 400

Leu Trp Ile His Gly Asn Asp Ala Asn Cys Ala Tyr Gly
            405                 410
```

<210> 90
<211> 320
<212> PRT
<213> Homo sapiens

<400> 90
```
Met Gly Asp Pro Glu Gly Ser Ala Glu Trp Gly Trp Gly Lys Gly Ile
  1                 5                 10                15

Pro Val Val Arg Arg Asn Leu Leu Thr Val Asp Gly Ile Ser Leu Cys
            20                  25                  30
```

```
Leu Glu Gly Ser Trp Trp Arg Gln Lys Gly Pro Ala Ser Pro Gly Phe
        35                  40                  45

Ser His Ser Leu Pro Arg Leu Gln Pro Asn Pro Gly Pro Ser Ser Thr
        50                  55                  60

Met Trp Leu Leu Leu Thr Leu Ser Phe Leu Leu Ala Ser Thr Ala Ala
65                  70                  75                  80

Gln Asp Gly Asp Lys Leu Leu Glu Gly Asp Glu Cys Ala Pro His Ser
                85                  90                  95

Gln Pro Trp Gln Val Ala Leu Tyr Glu Arg Gly Arg Phe Asn Cys Gly
                100                 105                 110

Ala Ser Leu Ile Ser Pro His Trp Val Leu Ser Ala Ala His Cys Gln
        115                 120 ·                 125

Ser Arg Phe Met Arg Val Arg Leu Gly Glu His Asn Leu Arg Lys Arg
        130                 135                 140

Asp Gly Pro Glu Gln Leu Arg Thr Thr Ser Arg Val Ile Pro His Pro
145                 150                 155                 160

Arg Tyr Glu Ala Arg Ser His Arg Asn Asp Ile Met Leu Leu Arg Leu
            165                 170                 175

Val Gln Pro Ala Arg Leu Asn Pro Gln Val Arg Pro Ala Val Leu Pro
            180                 185                 190

Thr Arg Cys Pro His Pro Gly Glu Ala Cys Val Val Ser Gly Trp Gly
        195                 200                 205

Leu Val Ser His Asn Glu Pro Gly Thr Ala Gly Ser Pro Arg Ser Gln
    210                 215                 220

Val Ser Leu Pro Asp Thr Leu His Cys Ala Asn Ile Ser Ile Ile Ser
225                 230                 235                 240

Asp Thr Ser Cys Asp Lys Ser Tyr Pro Gly Arg Leu Thr Asn Thr Met
            245                 250                 255

Val Cys Ala Gly Ala Glu Gly Arg Gly Ala Glu Ser Cys Glu Gly Asp
            260                 265                 270

Ser Gly Gly Pro Leu Val Cys Gly Gly Ile Leu Gln Gly Ile Val Ser
        275                 280                 285

Trp Gly Asp Val Pro Cys Asp Asn Thr Thr Lys Pro Gly Val Tyr Thr
    290                 295                 300

Lys Val Cys His Tyr Leu Glu Trp Ile Arg Glu Thr Met Lys Arg Asn
305                 310                 315                 320
```

<210> 91
<211> 328
<212> PRT
<213> Homo sapiens

<400> 91

```
Met Gly Pro Ala Gly Cys Ala Phe Thr Leu Leu Leu Leu Leu Gly Ile
 1               5                  10                  15

Ser Val Cys Gly Gln Pro Val Tyr Ser Ser Arg Val Val Gly Gly Gln
                20                  25                  30

Asp Ala Ala Ala Gly Arg Trp Pro Trp Gln Val Ser Leu His Phe Asp
        35                  40                  45

His Asn Phe Ile Cys Gly Gly Ser Leu Val Ser Glu Arg Leu Ile Leu
    50                  55                  60

Thr Ala Ala His Cys Ile Gln Pro Thr Trp Thr Thr Phe Ser Tyr Thr
65                  70                  75                  80

Val Trp Leu Gly Ser Ile Thr Val Gly Asp Ser Arg Lys Arg Val Lys
                85                  90                  95

Tyr Tyr Val Ser Lys Ile Val Ile His Pro Lys Tyr Gln Asp Thr Thr
               100                 105                 110

Ala Asp Val Ala Leu Leu Lys Leu Ser Ser Gln Val Thr Phe Thr Ser
        115                 120                 125

Ala Ile Leu Pro Ile Cys Leu Pro Ser Val Thr Lys Gln Leu Ala Ile
    130                 135                 140

Pro Pro Phe Cys Trp Val Thr Gly Trp Gly Lys Val Lys Glu Ser Ser
145                 150                 155                 160

Asp Arg Asp Tyr His Ser Ala Leu Gln Glu Ala Glu Val Pro Ile Ile
               165                 170                 175

Asp Arg Gln Ala Cys Glu Gln Leu Tyr Asn Pro Ile Gly Ile Phe Leu
               180                 185                 190

Pro Ala Leu Glu Pro Val Ile Lys Glu Asp Lys Ile Cys Ala Gly Asp
        195                 200                 205

Thr Gln Asn Met Lys Asp Ser Cys Lys Gly Asp Ser Gly Gly Pro Leu
    210                 215                 220

Ser Cys His Ile Asp Gly Val Trp Ile Gln Thr Gly Val Val Ser Trp
225                 230                 235                 240

Gly Leu Glu Cys Gly Lys Ser Leu Pro Gly Val Tyr Thr Asn Val Ile
               245                 250                 255

Tyr Tyr Gln Lys Trp Ile Asn Ala Thr Ile Ser Arg Ala Asn Asn Leu
               260                 265                 270
```

```
Asp Phe Ser Asp Phe Leu Phe Pro Ile Val Leu Leu Ser Leu Ala Leu
        275                 280             285

Leu Arg Pro Ser Cys Ala Phe Gly Pro Asn Thr Ile His Arg Val Gly
        290             295                 300

Thr Val Ala Glu Ala Val Ala Cys Ile Gln Gly Trp Glu Glu Asn Ala
305                 310             315                 320

Trp Arg Phe Ser Pro Arg Gly Arg
                325
```

<210> 92
<211> 425
<212> PRT
<213> Homo sapiens

<400> 92

```
Met Met Tyr Ala Pro Val Glu Phe Ser Glu Ala Glu Phe Ser Arg Ala
  1             5                 10                  15

Glu Tyr Gln Arg Lys Gln Gln Phe Trp Asp Ser Val Arg Leu Ala Leu
            20                  25                  30

Phe Thr Leu Ala Ile Val Ala Ile Ile Gly Ile Ala Ile Gly Ile Val
        35                  40                  45

Thr His Phe Val Val Glu Asp Asp Lys Ser Phe Tyr Tyr Leu Ala Ser
      50                  55                  60

Phe Lys Val Thr Asn Ile Lys Tyr Lys Glu Asn Tyr Gly Ile Arg Ser
65                  70                  75                  80

Ser Arg Glu Phe Ile Glu Arg Ser His Gln Ile Glu Arg Met Met Ser
                85                  90                  95

Arg Ile Phe Arg His Ser Ser Val Gly Gly Arg Phe Ile Lys Ser His
            100                 105                 110

Val Ile Lys Leu Ser Pro Asp Glu Gln Gly Val Asp Ile Leu Ile Val
        115                 120                 125

Leu Ile Phe Arg Tyr Pro Ser Thr Asp Ser Ala Glu Gln Ile Lys Lys
        130                 135                 140

Lys Ile Glu Lys Ala Leu Tyr Gln Ser Leu Lys Thr Lys Gln Leu Ser
145                 150                 155                 160

Leu Thr Ile Asn Lys Pro Ser Phe Arg Leu Thr Arg Cys Gly Ile Arg
                165                 170                 175

Met Thr Ser Ser Asn Met Pro Leu Pro Ala Ser Ser Ser Thr Gln Arg
            180                 185                 190

Ile Val Gln Gly Arg Glu Thr Ala Met Glu Gly Glu Trp Pro Trp Gln
        195                 200                 205
```

Ala Ser Leu Gln Leu Ile Gly Ser Gly His Gln Cys Gly Ala Ser Leu
    210   215   220

Ile Ser Asn Thr Trp Leu Leu Thr Ala Ala His Cys Phe Trp Lys Asn
225   230   235   240

Lys Asp Pro Thr Gln Trp Ile Ala Thr Phe Gly Ala Thr Ile Thr Pro
            245   250   255

Pro Ala Val Lys Arg Asn Val Arg Lys Ile Ile Leu His Glu Asn Tyr
            260   265   270

His Arg Glu Thr Asn Glu Asn Asp Ile Ala Leu Val Gln Leu Ser Thr
        275   280   285

Gly Val Glu Phe Ser Asn Ile Val Gln Arg Val Cys Leu Pro Asp Ser
    290   295   300

Ser Ile Lys Leu Pro Pro Lys Thr Ser Val Phe Val Thr Gly Phe Gly
305   310   315   320

Ser Ile Val Asp Asp Gly Pro Ile Gln Asn Thr Leu Arg Gln Ala Arg
            325   330   335

Val Glu Thr Ile Ser Thr Asp Val Cys Asn Arg Lys Asp Val Tyr Asp
            340   345   350

Gly Leu Ile Thr Pro Gly Met Leu Cys Ala Gly Phe Met Glu Gly Lys
        355   360   365

Ile Asp Ala Cys Lys Gly Asp Ser Gly Gly Pro Leu Val Tyr Asp Asn
    370   375   380

His Asp Ile Trp Tyr Ile Val Gly Ile Val Ser Trp Gly Gln Ser Cys
385   390   395   400

Ala Leu Pro Lys Lys Pro Gly Val Tyr Thr Arg Val Thr Lys Tyr Arg
            405   410   415

Asp Trp Ile Ala Ser Lys Thr Gly Met
            420   425

<210> 93
<211> 222
<212> PRT
<213> Homo sapiens

<400> 93
Arg Ile Ala Glu Gly Leu Asp Ala Glu Glu Gly Glu Trp Pro Trp Gln
  1   5   10   15

Ala Ser Leu Pro Gln Asn Asn Val Tyr Arg Arg Gly Ala Thr Trp Leu
            20   25   30

Ser Asn Ser Trp Leu Ile Thr Ala Ala His Cys Phe Ile Arg Val His
        35   40   45

```
Asp Pro Lys Glu Trp Asn Val Ile Leu Ser Asn Pro Gln Thr Gln Ser
    50              55              60

Asn Ile Lys Asn Val Ile Ile Gln Glu Asn Tyr His Tyr Pro Ala His
65              70              75              80

Asp Asn Asp Ile Ala Val Val His Leu Ser Ser Pro Val Leu Tyr Thr
            85              90              95

Ser Asn Ile Gln Lys Ala Cys Leu Pro Asp Val Asn Tyr Ile Phe Leu
        100             105             110

Tyr Asn Ser Glu Ala Val Val Thr Ala Trp Gly Ser Phe Lys Pro Leu
        115             120             125

Arg Thr Thr Ser Asn Val Leu His Lys Gly Leu Val Lys Ile Ile Asp
    130             135             140

Asn Arg Thr Cys Asn Asn Gly Glu Ala Asp Gly Arg Val Ile Thr Ser
145             150             155             160

Gly Met Leu Cys Ala Gly Phe Leu Glu Pro Arg Val Asp Ala Cys Gln
            165             170             175

Gly Asp Ser Gly Gly Pro Leu Val Gly Thr Asp Ser Lys Gly Ile Leu
            180             185             190

Ala Lys Gly Ser Leu Leu Val Leu Lys Ala Gly Val Asn Glu Arg Ala
            195             200             205

Leu Pro Asn Lys Pro Ser Val Tyr Thr Gln Val Thr Tyr Tyr
    210             215             220


<210> 94
<211> 948
<212> PRT
<213> Homo sapiens

<400> 94
Met Val Ser Lys Gly Gly Val Ala Ala Glu Pro Glu Pro His Tyr Cys
1               5               10              15

Glu Asp Ser Glu Arg Gly Pro Asn Thr Leu Thr Gly Pro Gly Ser Leu
            20              25              30

Pro Arg Gly Gly Gly Ile Glu Val Gly Met Glu Phe Pro Gly Cys Ser
        35              40              45

Gly Glu Gly Cys Val Lys Pro His Glu Glu Ala Ala Arg Glu Gly Ala
    50              55              60

Gly Arg Gly Lys Arg Ala Val Pro Gly Pro Lys Arg Arg Gln Gln Gly
65              70              75              80

Ser Ala Glu Gly Pro Ala Ala Gly Trp Thr Leu Glu Gln Glu Thr Arg
            85              90              95
```

```
Gly Asp Val Leu Glu Asp Lys Asn Glu Arg Ala Asp Glu Glu Ile Leu
            100             ·       105             110

Arg Leu Ala Pro Gly Lys Gly Arg Leu Pro Ile Asp Ser Lys His Leu
            115             120             125

Lys Pro Val Ile Ser Ser Phe Pro Val Arg Ser Gln Glu Leu Gly Glu
            130             135             140

Gly Ala Gly Ala Gly Thr Leu Arg Gly Lys Met Ala Glu Phe Asn Trp
145                 150             155                 160

Ser Met Ala Phe Lys Gly Pro Ala Ala Gly His Glu Glu Arg Leu Asn
                165             170             175

Ser Val Ser Ser Arg Ala Lys Lys Gly Ile Gly Trp Asp Val Ala Ala
            180             185             190

Ala Ser Leu Arg Gly Val Asp His Phe Ser Asp Leu Pro Pro Pro Leu
            195             200             205

Gln Val Arg Glu Glu Leu Glu Ala Cys Ala Phe Arg Val Gln Val Gly
            210             215             220

Gln Leu Arg Leu Tyr Glu Asp Asp Gln Arg Thr Lys Val Val Glu Ile
225                 230             235                 240

Val Arg His Pro Gln Tyr Asn Glu Ser Leu Ser Ala Gln Gly Gly Ala
                245             250         ·       255

Asp Ile Ala Leu Leu Lys Leu Glu Ala Pro Val Pro Leu Ser Glu Leu
            260             265             270

Ile His Pro Val Ser Leu Pro Ser Ala Ser Leu Asp Val Pro Ser Gly
            275             280             285

Lys Thr Cys Trp Val Thr Gly Trp Gly Val Ile Gly Arg Gly Glu Leu
            290             295             300

Leu Pro Trp Pro Leu Ser Leu Trp Glu Ala Thr Val Lys Val Arg Ser
305                 310             315                 320

Asn Val Leu Cys Asn Gln Thr Cys Arg Arg Phe Pro Ser Asn His
            325             330   ·           335

Thr Glu Arg Phe Glu Arg Leu Ile Lys Asp Asp Met Leu Cys Ala Gly
            340             345             350

Asp Gly Asn His Gly Ser Trp Pro Gly Asp Asn Gly Gly Pro Leu Leu
            355             360             365

Cys Arg Arg Asn Cys Thr Trp Val Gln Val Glu Val Val Ser Trp Gly
            370             375             380

Lys Leu Cys Gly Leu Arg Gly Tyr Pro Gly Met Tyr Thr Arg Val Thr
385                 390             395                 400
```

```
Ser Tyr Val Ser Trp Ile Arg Gln Pro Cys Pro Ser Ala Gln Thr Pro
            405              410              415

Ala Val Val Arg Arg Phe Val Leu Pro Pro Asn Pro Asp Val Glu Ala
            420              425              430

Leu Thr Pro Ser Val Met Gly Ser Gly Ala Pro Leu Pro Pro Ala Pro
            435              440              445

Asp Leu Gln Glu Ala Glu Val Pro Ile Met Arg Thr Arg Ala Cys Glu
    450              455              460

Arg Met Tyr His Lys Gly Pro Thr Ala His Gly Gln Val Thr Ile Ile
465              470              475              480

Lys Ala Ala Met Pro Cys Ala Gly Arg Lys Gly Gln Gly Ser Cys Gln
            485              490              495

Ala Ala Leu Arg Thr Glu Asp Leu Thr Pro Thr Thr Pro Asn Thr Glu
            500              505              510

Val Ser Pro Arg Ala Asp Pro Arg Leu Ser Gln Pro Glu Asp Ile Trp
            515              520              525

Pro Glu Trp Ala Trp Pro Val Val Val Gly Thr Thr Met Leu Leu Leu
    530              535              540

Leu Leu Phe Leu Ala Val Ser Ser Leu Gly Ser Cys Ser Thr Gly Ser
545              550              555              560

Pro Ala Pro Val Pro Glu Asn Asp Leu Val Gly Ile Val Gly Gly His
            565              570              575

Asn Thr Pro Gly Glu Val Val Val Ala Val Gly Ala Asp Arg Arg Ser
            580              585              590

Leu His Phe Pro Glu Gly His Arg Pro Val His Leu Pro Asp Ser His
    595              600              605

Gln Gly Cys Val Ser Val Arg Gly Pro Gly Ala Ala Glu Cys Gln Pro
    610              615              620

Asp Arg Arg Pro Pro Asn Tyr Ser Val Phe Phe Leu Gly Ala Asp Ile
625              630              635              640

Ala Leu Leu Lys Leu Ala Thr Ser Ser Leu Glu Phe Thr Asp Ser Asp
            645              650              655

Asn Cys Trp Asn Thr Gly Trp Gly Met Val Gly Leu Leu Asp Met Leu
            660              665              670

Pro Pro Pro Tyr Arg Pro Gln Gln Val Lys Val Leu Thr Leu Ser Asn
    675              680              685

Ala Asp Cys Glu Arg Gln Thr Tyr Asp Ala Phe Pro Gly Ala Gly Asp
    690              695              700
```

```
Arg Lys Phe Ile Gln Asp Asp Met Ile Cys Ala Gly Arg Thr Gly Arg
705             710             715                         720

Arg Thr Trp Lys Gly Asp Ser Gly Gly Pro Leu Val Cys Lys Lys Lys
                725             730                 735

Gly Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly Phe Tyr Ser Asp
            740             745             750

Arg Pro Ser Ile Gly Val Tyr Thr Arg Pro Glu Thr Ser Trp Gln Gly
        755             760             765

Ala Asn His Ala Asp Ala Gln Arg Pro Ala Gly Arg Val Pro Thr Met
        770             775             780

Gln Arg Pro Arg Asp Met Gly Gln Gly Gln Glu Trp Val Cys Arg Pro
785             790             795                         800

Phe Thr His Val Thr Cys Tyr Pro Thr Ala Ile Pro Arg Pro Phe Thr
            805             810                 815

His Val Thr Cys Tyr Leu Met Ala Val Pro Ser Thr Leu Thr His Val
            820             825                 830

Thr Cys Tyr Pro Thr Ala Val Pro Arg Pro Phe Thr His Val Thr Cys
        835             840             845

Tyr Leu Met Ala Val Pro Ser Thr Leu Thr His Ile Thr Cys Tyr Met
    850             855             860

Met Ala Val Pro Arg Pro Phe Thr His Ile Thr Cys Tyr Pro Met Ala
865             870             875                         880

Val Pro Ser Thr Leu Thr His Val Thr Cys His Pro Thr Ala Ile Pro
            885             890                 895

Arg Pro Phe Thr His Ile Thr Cys Tyr Thr Met Ala Ile Pro Arg Pro
        900             905             910

Ser Thr Thr Pro Pro Ala Thr Arg Arg Pro Ser Pro Ala Pro Ser Pro
    915             920             925

Thr Ser Pro Ala Thr Arg Trp Pro Ser Pro Gly Pro Ser Pro Met Ser
    930             935             940

Pro Ala Thr Arg
945
```

```
<210> 95
<211> 352
<212> PRT
<213> Homo sapiens

<400> 95
```

```
Met Leu Leu Phe Ser Val Leu Leu Leu Ser Leu Val Thr Arg Thr
 1           5               10              15
```

Gln Leu Gly Pro Arg Thr Pro Leu Pro Glu Ala Gly Val Ala Ile Leu
            20   25   30

Gly Arg Ala Arg Gly Ala His Arg Pro Gln Pro Pro His Pro Pro Ser
            35   40   45

Pro Val Ser Glu Cys Gly Asp Arg Ser Ile Phe Glu Gly Arg Thr Arg
        50   55   60

Tyr Ser Arg Ile Thr Gly Gly Met Glu Ala Glu Val Gly Glu Phe Pro
65   70   75   80

Trp Gln Val Ser Ile Gln Val Arg Ser Glu Pro Phe Cys Gly Gly Ser
            85   90   95

Ile Leu Asn Lys Trp Trp Ile Leu Thr Ala Ala His Cys Leu Tyr Ser
            100   105   110

Glu Glu Leu Phe Pro Glu Glu Leu Ser Val Val Leu Gly Thr Asn Asp
            115   120   125

Leu Thr Ser Pro Ser Met Glu Ile Lys Glu Val Ala Ser Ile Ile Leu
    130   135   140

His Lys Asp Phe Lys Arg Ala Asn Met Asp Asn Asp Ile Ala Leu Leu
145   150   155   160

Leu Leu Ala Ser Pro Ile Lys Leu Asp Asp Leu Lys Val Pro Ile Cys
            165   170   175

Leu Pro Thr Gln Pro Gly Pro Ala Thr Trp Arg Glu Cys Trp Val Ala
            180   185   190

Gly Trp Gly Gln Thr Asn Ala Ala Asp Lys Asn Ser Val Lys Thr Asp
    195   200   205

Leu Met Lys Ala Pro Met Val Ile Met Asp Trp Glu Glu Cys Ser Lys
    210   215   220

Met Phe Pro Lys Leu Thr Lys Asn Met Leu Cys Ala Gly Tyr Lys Asn
225   230   235   240

Glu Ser Tyr Asp Ala Cys Lys Gly Asp Ser Gly Gly Pro Leu Val Cys
            245   250   255

Thr Pro Glu Pro Gly Glu Lys Trp Tyr Gln Val Gly Ile Ile Ser Trp
            260   265   270

Gly Lys Ser Cys Gly Glu Lys Asn Thr Pro Gly Ile Tyr Thr Ser Leu
            275   280   285

Val Asn Tyr Asn Leu Trp Ile Glu Lys Val Thr Gln Leu Glu Gly Arg
    290   295   300

Pro Phe Asn Ala Glu Lys Arg Arg Thr Ser Val Lys Gln Lys Pro Met
305   310   315   320

Gly Ser Pro Val Ser Gly Val Pro Glu Pro Gly Ser Pro Arg Ser Trp
              325   330   335

Leu Leu Leu Cys Pro Leu Ser His Val Leu Phe Arg Ala Ile Leu Tyr
              340   345   350

<210> 96
<211> 263
<212> PRT
<213> Homo sapiens

<400> 96
Met Ala Ser Leu Trp Leu Leu Ser Cys Phe Ser Leu Val Gly Ala Ala
  1   5   10   15

Phe Gly Cys Gly Val Pro Ala Ile His Pro Val Leu Ser Gly Leu Ser
              20   25   30

Arg Ile Val Asn Gly Glu Asp Ala Val Pro Gly Ser Trp Pro Trp Gln
          35   40   45

Val Ser Leu Gln Asp Lys Thr Gly Phe His Phe Cys Gly Gly Ser Leu
      50   55   60

Ile Ser Glu Asp Trp Val Val Thr Ala Ala His Cys Gly Val Arg Thr
  65   70   75   80

Ser Asp Val Val Val Ala Gly Glu Phe Asp Gln Gly Ser Asp Glu Glu
              85   90   95

Asn Ile Gln Val Leu Lys Ile Ala Lys Val Phe Lys Asn Pro Lys Phe
              100   105   110

Ser Ile Leu Thr Val Asn Asn Asp Ile Thr Leu Leu Lys Leu Ala Thr
          115   120   125

Pro Ala Arg Phe Ser Gln Thr Val Ser Ala Val Cys Leu Pro Ser Ala
      130   135   140

Asp Asp Asp Phe Pro Ala Gly Thr Leu Cys Ala Thr Thr Gly Trp Gly
145   150   155   160

Lys Thr Lys Tyr Asn Ala Asn Lys Thr Pro Asp Lys Leu Gln Gln Ala
              165   170   175

Ala Leu Pro Leu Leu Ser Asn Ala Glu Cys Lys Lys Ser Trp Gly Arg
              180   185   190

Arg Ile Thr Asp Val Met Ile Cys Ala Gly Ala Ser Gly Val Ser Ser
          195   200   205

Cys Met Gly Asp Ser Gly Gly Pro Leu Val Cys Gln Lys Asp Gly Ala
      210   215   220

Trp Thr Leu Val Gly Ile Val Ser Trp Gly Ser Arg Thr Cys Ser Thr
225   230   235   240

Thr Thr Pro Ala Val Tyr Ala Arg Val Thr Lys Leu Ile Pro Trp Val
            245   250   255

Gln Lys Ile Leu Ala Ala Asn
            260

<210> 97
<211> 1128
<212> PRT
<213> Homo sapiens

<400> 97
Met Glu Pro Thr Val Ala Asp Val His Leu Val Pro Arg Thr Thr Lys
  1   5   10   15

Glu Val Pro Ala Leu Asp Ala Ala Cys Cys Arg Ala Ala Ser Ile Gly
            20   25   30

Val Val Ala Thr Ser Leu Val Val Leu Thr Leu Gly Val Leu Leu Gly
        35   40   45

Gly Met Asn Asn Ser Arg His Ala Ala Leu Arg Ala Ala Thr Leu Pro
        50   55   60

Gly Lys Val Tyr Ser Val Thr Pro Glu Ala Ser Lys Thr Thr Asn Pro
65   70   75   80

Pro Glu Gly Arg Asn Ser Glu His Ile Arg Thr Ser Ala Arg Thr Asn
                85   90   95

Ser Gly His Thr Ile Phe Lys Lys Cys Asn Thr Gln Pro Phe Leu Ser
            100   105   110

Thr Gln Gly Phe His Val Asp His Thr Ala Glu Leu Arg Gly Ile Arg
        115   120   125

Trp Thr Ser Ser Leu Arg Arg Glu Thr Ser Asp Tyr His Arg Thr Leu
    130   135   140

Thr Pro Thr Leu Glu Ala Leu Leu His Phe Leu Leu Arg Pro Leu Gln
145   150   155   160

Thr Leu Ser Leu Gly Leu Glu Glu Glu Leu Leu Gln Arg Gly Ile Arg
                165   170   175

Ala Arg Leu Arg Glu His Gly Ile Ser Leu Ala Ala Tyr Gly Thr Ile
            180   185   190

Val Ser Ala Glu Leu Thr Gly Arg His Lys Gly Pro Leu Ala Glu Arg
        195   200   205

Asp Phe Lys Ser Gly Arg Cys Pro Gly Asn Ser Phe Ser Cys Gly Asn
    210   215   220

```
Ser Gln Cys Val Thr Lys Val Asn Pro Glu Cys Asp Asp Gln Glu Asp
225             230             235             240

Cys Ser Asp Gly Ser Asp Glu Ala His Cys Glu Cys Gly Leu Gln Pro
            245             250             255

Ala Trp Arg Met Ala Gly Arg Ile Val Gly Gly Met Glu Ala Ser Pro
        260             265             270

Gly Glu Phe Pro Trp Gln Ala Ser Leu Arg Glu Asn Lys Glu His Phe
        275             280             285

Cys Gly Ala Ala Ile Ile Asn Ala Arg Trp Leu Val Ser Ala Ala His
    290             295             300

Cys Phe Asn Glu Phe Gln Asp Pro Thr Lys Trp Val Ala Tyr Val Gly
305             310             315             320

Ala Thr Tyr Leu Ser Gly Ser Glu Ala Ser Thr Val Arg Ala Gln Val
            325             330             335

Val Gln Ile Val Lys His Pro Leu Tyr Asn Ala Asp Thr Ala Asp Phe
        340             345             350

Asp Val Ala Val Leu Glu Leu Thr Ser Pro Leu Pro Phe Gly Arg His
    355             360             365

Ile Gln Pro Val Cys Leu Pro Ala Ala Thr His Ile Phe Pro Pro Ser
    370             375             380

Lys Lys Cys Leu Ile Ser Gly Trp Gly Tyr Leu Lys Glu Asp Phe Arg
385             390             395             400

Lys His Leu Pro Arg Pro Ala Met Val Lys Pro Glu Val Leu Gln Lys
            405             410             415

Ala Thr Val Glu Leu Leu Asp Gln Ala Leu Cys Ala Ser Leu Tyr Gly
        420             425             430

His Ser Leu Thr Asp Arg Met Val Cys Ala Gly Tyr Leu Asp Gly Lys
    435             440             445

Val Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Glu Glu
    450             455             460

Pro Ser Gly Arg Phe Phe Leu Ala Gly Ile Val Ser Trp Gly Ile Gly
465             470             475             480

Cys Ala Glu Ala Arg Arg Pro Gly Val Tyr Ala Arg Val Thr Arg Leu
            485             490             495

Arg Asp Trp Ile Leu Glu Ala Thr Thr Lys Ala Ser Met Pro Leu Ala
        500             505             510

Pro Thr Met Ala Pro Ala Pro Ala Ala Pro Ser Thr Ala Trp Pro Thr
    515             520             525
```

Ser Pro Glu Ser Pro Val Val Ser Thr Pro Thr Lys Ser Met Gln Ala
    530   535   540

Leu Ser Thr Val Pro Leu Asp Trp Val Thr Val Pro Lys Leu Gln Glu
545   .   550   555   560

Cys Gly Ala Arg Pro Ala Met Glu Lys Pro Thr Arg Val Val Gly Gly
            565   570   575

Phe Gly Ala Ala Ser Gly Glu Val Pro Trp Gln Val Ser Leu Lys Glu
            580   585   590

Gly Ser Arg His Phe Cys Gly Ala Thr Val Val Gly Asp Arg Trp Leu
        595   600   605

Leu Ser Ala Ala His Cys Phe Asn His Thr Lys Val Glu Gln Val Arg
    610   615   620

Ala His Leu Gly Thr Ala Ser Leu Leu Gly Leu Gly Gly Ser Pro Val
625   630   635   640

Lys Ile Gly Leu Arg Arg Val Val Leu His Pro Leu Tyr Asn Pro Gly
            645   650   .   655

Ile Leu Asp Phe Asp Leu Ala Val Leu Glu Leu Ala Ser Pro Leu Ala
            660   665   670

Phe Asn Lys Tyr Ile Gln Pro Val Cys Leu Pro Leu Ala Ile Gln Lys
        675   680   685

Phe Pro Val Gly Arg Lys Cys Met Ile Ser Gly Trp Gly Asn Thr Gln
    690   695   700

Glu Gly Asn Ala Thr Lys Pro Glu Leu Leu Gln Lys Ala Ser Val Gly
705   710   715   720

Ile Ile Asp Gln Lys Thr Cys Ser Val Leu Tyr Asn Phe Ser Leu Thr
            725   730   735

Asp Arg Met Ile Cys Ala Gly Phe Leu Glu Gly Lys Val Asp Ser Cys
            740   745   750

Gln Gly Asp Ser Gly Gly Pro Leu Ala Cys Glu Glu Ala Pro Gly Val
    755   760   765

Phe Tyr Leu Ala Gly Ile Val Ser Trp Gly Ile Gly Cys Ala Gln Val
    770   775   780

Lys Lys Pro Gly Val Tyr Thr Arg Ile Thr Arg Leu Lys Gly Trp Ile
785   790   795   800

Leu Glu Ile Met Ser Ser Gln Pro Leu Pro Met Ser Pro Pro Ser Thr
            805   810   815

Thr Arg Met Leu Ala Thr Thr Ser Pro Arg Thr Thr Ala Gly Leu Thr
            820   825   830

Val Pro Gly Ala Thr Pro Ser Arg Pro Thr Pro Gly Ala Ala Ser Arg
  835   840   845

Val Thr Gly Gln Pro Ala Asn Ser Thr Leu Ser Ala Val Ser Thr Thr
 850   855   860

Ala Arg Gly Gln Thr Pro Phe Pro Asp Ala Pro Glu Ala Thr Thr His
865   870   875   880

Thr Gln Leu Pro Asp Cys Gly Leu Ala Pro Ala Ala Leu Thr Arg Ile
    885   890   895

Val Gly Gly Ser Ala Ala Gly Arg Gly Glu Trp Pro Trp Gln Val Ser
   900   905   910

Leu Trp Leu Arg Arg Arg Glu His Arg Cys Gly Ala Val Leu Val Ala
  915   920   925

Glu Arg Trp Leu Leu Ser Ala Ala His Cys Phe Asp Val Tyr Gly Asp
 930   935   940

Pro Lys Gln Trp Ala Ala Phe Leu Gly Thr Pro Phe Leu Ser Gly Ala
945   950   955   960

Glu Gly Gln Leu Glu Arg Val Ala Arg Ile Tyr Lys His Pro Phe Tyr
   965   970   975

Asn Leu Tyr Thr Leu Asp Tyr Asp Val Ala Leu Leu Glu Leu Ala Gly
   980   985   990

Pro Val Arg Arg Ser Arg Leu Val Arg Pro Ile Cys Leu Pro Glu Pro
  995   1000   1005

Ala Pro Arg Pro Pro Asp Gly Thr Arg Cys Val Ile Thr Gly Trp Gly
 1010   1015   1020

Ser Val Arg Glu Gly Gly Ser Met Ala Arg Gln Leu Gln Lys Ala Ala
1025   1030   1035   1040

Val Arg Leu Leu Ser Glu Gln Thr Cys Arg Arg Phe Tyr Pro Val Gln
    1045   1050   1055

Ile Ser Ser Arg Met Leu Cys Ala Gly Phe Pro Gln Gly Gly Val Asp
   1060   1065   1070

Ser Cys Ser Gly Asp Ala Gly Gly Pro Leu Ala Cys Arg Glu Pro Ser
  1075   1080   1085

Gly Arg Trp Val Leu Thr Gly Val Thr Ser Trp Gly Tyr Gly Cys Gly
 1090   1095   1100

Arg Pro His Phe Pro Gly Val Tyr Thr Arg Val Ala Ala Val Arg Gly
1105   1110   1115   1120

Trp Ile Gly Gln His Ile Gln Glu
   1125

<210> 98
<211> 253
<212> PRT
<213> Homo sapiens

<400> 98
```
Met Ala Arg Ser Leu Leu Leu Pro Leu Gln Ile Leu Leu Leu Ser Leu
 1               5                  10                  15

Ala Leu Glu Thr Ala Gly Glu Glu Ala Gln Gly Asp Lys Ile Ile Asp
                20                  25                  30

Gly Ala Pro Cys Ala Arg Gly Ser His Pro Trp Gln Val Ala Leu Leu
            35                  40                  45

Ser Gly Asn Gln Leu His Cys Gly Gly Val Leu Val Asn Glu Arg Trp
        50                  55                  60

Val Leu Thr Ala Ala His Cys Lys Met Asn Glu Tyr Thr Val His Leu
 65                 70                  75                  80

Gly Ser Asp Thr Leu Gly Asp Arg Arg Ala Gln Arg Ile Lys Ala Ser
                85                  - 90                  95

Lys Ser Phe Arg His Pro Gly Tyr Ser Thr Gln Thr His Val Asn Asp
            100                 105                 110

Leu Met Leu Val Lys Leu Asn Ser Gln Ala Arg Leu Ser Ser Met Val
        115                 120                 125

Lys Lys Val Arg Leu Pro Ser Arg Cys Glu Pro Pro Gly Thr Thr Cys
        130                 135                 140

Thr Val Ser Gly Trp Gly Thr Thr Thr Ser Pro Asp Val Thr Phe Pro
145                 150                 155                 160

Ser Asp Leu Met Cys Val Asp Val Lys Leu Ile Ser Pro Gln Asp Cys
                165                 170                 175

Thr Lys Val Tyr Lys Asp Leu Leu Glu Asn Ser Met Leu Cys Ala Gly
                180                 185                 190

Ile Pro Asp Ser Lys Lys Asn Ala Cys Asn Gly Asp Ser Gly Gly Pro
            195                 200                 205

Leu Val Cys Arg Gly Thr Leu Gln Gly Leu Val Ser Trp Gly Thr Phe
        210                 215                 220

Pro Cys Gly Gln Pro Asn Asp Pro Gly Val Tyr Thr Gln Val Cys Lys
225                 230                 235                 240

Phe Thr Lys Trp Ile Asn Asp Thr Met Lys Lys His Arg
                245                 250
```

<210> 99
<211> 272
<212> PRT

<213> Homo sapiens

<400> 99

```
Val Ser Thr Val Cys Gly Lys Pro Lys Val Val Gly Lys Ile Tyr Gly
 1               5                  10                  15

Gly Arg Asp Ala Ala Ala Gly Gln Trp Pro Trp Gln Ala Ser Leu Leu
            20                  25                  30

Tyr Trp Gly Ser His Leu Cys Gly Ala Val Leu Ile Asp Ser Cys Trp
        35                  40                  45

Leu Val Ser Thr Thr His Cys Phe Leu Asn Lys Ser Gln Ala Pro Lys
    50                  55                  60

Asn Tyr Gln Val Leu Leu Gly Asn Ile Gln Leu Tyr His Gln Thr Gln
65                  70          ·       75                  80

His Thr Gln Lys Met Ser Val His Arg Ile Ile Thr His Pro Asp Phe
            85                  90                  95

Glu Lys Leu His Pro Phe Gly Ser Asp Ile Ala Met Leu Gln Leu His
            100                 105                 110

Leu Pro Met Asn Phe Thr Ser Tyr Ile Val Pro Val Cys Leu Pro Ser
        115                 120                 125

Arg Asp Met Gln Leu Pro Ser Asn Val Ser Cys Trp Ile Thr Gly Trp
    130                 135                 140

Gly Met Leu Thr Glu Asp His Lys Arg Val Gln Leu Ser Pro Pro Phe
145                 150                 155                 160

Tyr Leu Gln Glu Gly Lys Val Gly Leu Ile Glu Asn Thr Leu Cys Asn
            165                 170                 175

Thr Leu Tyr Gly Gln Arg Thr Ala Lys Ala Arg Pro Lys Leu Cys Thr
            180                 185                 190

Arg Arg Cys Cys Val Gly Gly Tyr Phe Ser Thr Gly Lys Ser Ile Cys
        195                 200                 205

Lys Gly Asp Ser Gly Gly Pro Leu Val Cys Tyr Leu Pro Ser Ala Trp
    210                 215                 220

Val Leu Val Gly Leu Ala Ser Trp Gly Leu Asp Cys Arg His Pro Ala
225                 230                 235                 240

Tyr Pro Ser Ile Phe Thr Arg Val Thr Tyr Phe Ile Asn Trp Ile Asp
            245                 250                 255

Glu Ile Met Arg Leu Thr Pro Leu Ser Asp Pro Ala Leu Ala Pro His
            260                 265                 270
```

<210> 100
<211> 578
<212> PRT
<213> Homo sapiens

<400> 100

```
Met Leu Leu Ala Val Leu Leu Leu Leu Pro Leu Pro Ser Ser Trp Phe
 1               5                  10                  15

Ala His Gly His Pro Leu Tyr Thr Arg Leu Pro Pro Ser Ala Leu Gln
            20                  25                  30

Val Phe Thr Leu Leu Leu Gly Ala Glu Thr Val Leu Gly Arg Asn Leu
        35                  40                  45

Asp Tyr Val Cys Glu Gly Pro Cys Gly Glu Arg Arg Pro Ser Thr Ala
    50                  55                  60

Asn Val Thr Arg Ala His Gly Arg Ile Val Gly Gly Ser Ala Ala Pro
65                  70                  75                  80

Pro Gly Ala Trp Pro Trp Leu Val Arg Leu Gln Leu Gly Gly Gln Pro
            85                  90                  95

Leu Cys Gly Gly Val Leu Val Ala Ala Ser Trp Val Leu Thr Ala Ala
            100                 105                 110

His Cys Phe Val Gly Cys Arg Ser Thr Arg Ser Ala Pro Asn Glu Leu
        115                 120                 125

Leu Trp Thr Val Thr Leu Ala Glu Gly Ser Arg Gly Glu Gln Ala Glu
    130                 135                 140

Glu Val Pro Val Asn Arg Ile Leu Pro His Pro Lys Phe Asp Pro Arg
145                 150                 155                 160

Thr Phe His Asn Asp Leu Ala Leu Val Gln Leu Trp Thr Pro Val Ser
            165                 170                 175

Pro Gly Gly Ser Ala Arg Pro Val Cys Leu Pro Gln Glu Pro Gln Glu
            180                 185                 190

Pro Pro Ala Gly Thr Ala Cys Ala Ile Ala Gly Trp Gly Ala Leu Phe
        195                 200                 205

Glu Asp Gly Pro Glu Ala Glu Ala Val Arg Glu Ala Arg Val Pro Leu
    210                 215                 220

Leu Ser Thr Asp Thr Cys Arg Arg Ala Leu Gly Pro Gly Leu Arg Pro
225                 230                 235                 240

Ser Thr Met Leu Cys Ala Gly Tyr Leu Ala Gly Gly Val Asp Ser Cys
            245                 250                 255

Gln Gly Asp Ser Gly Gly Pro Leu Thr Cys Ser Glu Pro Gly Pro Arg
            260                 265                 270
```

Pro Arg Glu Val Leu Phe Gly Val Thr Ser Trp Gly Asp Gly Cys Gly
   275   280   285

Glu Pro Gly Lys Pro Gly Val Tyr Thr Arg Val Ala Val Phe Lys Asp
  290   295   300

Trp Leu Gln Glu Gln Met Ser Ala Ala Ser Ser Ser Arg Glu Pro Ser
305   310   315   320

Cys Arg Glu Leu Leu Ala Trp Asp Pro Pro Gln Glu Leu Gln Ala Asp
    325   330   335

Ala Ala Arg Leu Cys Ala Phe Tyr Ala Arg Leu Cys Pro Gly Ser Gln
    340   345   350

Gly Ala Cys Ala Arg Leu Ala His Gln Gln Cys Leu Gln Arg Arg Arg
    355   360   365

Arg Cys Glu Leu Arg Ser Leu Ala His Thr Leu Leu Gly Leu Leu Arg
  370   375   380

Asn Ala Gln Glu Leu Leu Gly Pro Arg Pro Gly Leu Arg Arg Leu Ala
385   390   ,395   400

Pro Ala Leu Ala Leu Pro Ala Pro Ala Leu Arg Glu Ser Pro Leu His
    405   410   415

Pro Ala Arg Glu Leu Arg Leu His Ser Gly Ser Arg Ala Ala Gly Thr
    420   425   430

Arg Phe Pro Lys Arg Arg Pro Glu Pro Arg Gly Glu Ala Asn Gly Cys
   435   440   445

Pro Gly Leu Glu Pro Leu Arg Gln Lys Leu Ala Ala Leu Gln Gly Ala
  450   455   460

His Ala Trp Ile Leu Gln Val Pro Ser Glu His Leu Ala Met Asn Phe
465   470   475   480

His Glu Val Leu Ala Asp Leu Gly Ser Lys Thr Leu Thr Gly Leu Phe
    485   490   495

Arg Ala Trp Val Arg Ala Gly Leu Gly Gly Arg His Val Ala Phe Ser
    500   505   510

Gly Leu Val Gly Leu Glu Pro Ala Thr Leu Ala Arg Ser Leu Pro Arg
   515   520   525

Leu Leu Val Gln Ala Leu Gln Ala Phe Arg Val Ala Ala Leu Ala Glu
  530   535   540

Gly Glu Pro Glu Gly Pro Trp Met Asp Val Gly Gln Gly Pro Gly Leu
545   550   555   560

Glu Arg Lys Gly His His Pro Leu Asn Pro Gln Val Pro Pro Ala Arg
    565   570   575

Gln Pro

<210> 101
<211> 970
<212> PRT
<213> Homo sapiens

<400> 101

Met	Ser	Pro	Asp	Ile	Ala	Leu	Leu	Tyr	Leu	Lys	His	Lys	Val	Lys	Phe
1				5					10					15	

Gly	Asn	Ala	Val	Gln	Pro	Ile	Cys	Leu	Pro	Asp	Ser	Asp	Asp	Lys	Val
			20				25				30				

Glu	Pro	Gly	Ile	Leu	Cys	Leu	Ser	Ser	Gly	Trp	Gly	Lys	Ile	Ser	Lys
		35					40				45				

Thr	Ser	Glu	Tyr	Ser	Asn	Val	Leu	Gln	Glu	Met	Glu	Leu	Pro	Ile	Met
	50					55					60				

Asp	Asp	Arg	Ala	Cys	Asn	Thr	Val	Leu	Lys	Ser	Met	Asn	Leu	Pro	Pro
65					70					75					80

Leu	Gly	Arg	Thr	Met	Leu	Cys	Ala	Gly	Phe	Pro	Asp	Trp	Gly	Met	Asp
				85					90					95	

Ala	Cys	Gln	Gly	Asp	Ser	Gly	Gly	Pro	Leu	Val	Cys	Arg	Arg	Gly	Gly
			100					105					110		

Gly	Ile	Trp	Ile	Leu	Ala	Gly	Ile	Thr	Ser	Trp	Val	Ala	Gly	Cys	Ala
		115				120					125				

Gly	Gly	Ser	Val	Pro	Val	Arg	Asn	Asn	His	Val	Lys	Ala	Ser	Leu	Gly
	130				135					140					

Ile	Phe	Ser	Lys	Val	Ser	Glu	Leu	Met	Asp	Phe	Ile	Thr	Gln	Asn	Leu
145					150					155					160

Phe	Thr	Gly	Leu	Asp	Arg	Gly	Gln	Pro	Leu	Ser	Lys	Val	Gly	Ser	Arg
			165					170					175		

Tyr	Ile	Thr	Lys	Ala	Leu	Ser	Ser	Val	Gln	Glu	Val	Asn	Gly	Ser	Gln
			180					185					190		

Arg	Asp	Lys	Ile	Ile	Leu	Ile	Lys	Phe	Thr	Ser	Leu	Asp	Met	Glu	Lys
		195				200					205				

Gln	Val	Gly	Cys	Asp	His	Asp	Tyr	Val	Ser	Leu	Arg	Ser	Ser	Ser	Gly
	210				215					220					

Val	Leu	Phe	Ser	Lys	Val	Cys	Gly	Lys	Ile	Leu	Pro	Ser	Pro	Leu	Leu
225					230					235					240

Ala	Glu	Thr	Ser	Glu	Ala	Met	Val	Pro	Phe	Val	Ser	Asp	Thr	Glu	Asp
				245				250					255		

```
Ser Gly Ser Gly Phe Glu Leu Thr Val Thr Ala Val Gln Lys Ser Glu
        260             265             270

Ala Gly Ser Gly Cys Gly Ser Leu Ala Ile Leu Val Glu Glu Gly Thr
        275             280             285

Asn His Ser Ala Lys Tyr Pro Asp Leu Tyr Pro Ser Asn Thr Arg Cys
290             295             300

His Trp Phe Ile Cys Ala Pro Glu Lys His Ile Ile Lys Leu Thr Phe
305             310             315             320

Glu Asp Phe Ala Val Lys Phe Ser Pro Asn Cys Ile Tyr Asp Ala Val
            325             330             335

Val Ile Tyr Gly Asp Ser Glu Glu Lys His Lys Leu Ala Lys Leu Cys
            340             345             350

Gly Met Leu Thr Ile Thr Ser Ile Phe Ser Ser Ser Asn Met Thr Val
        355             360             365

Ile Tyr Phe Lys Ser Asp Gly Lys Asn Arg Leu Gln Gly Phe Lys Ala
    370             375             380

Arg Phe Thr Ile Leu Pro Ser Glu Ser Leu Asn Lys Phe Glu Pro Lys
385             390             395             400

Leu Pro Pro Gln Asn Asn Pro Val Ser Thr Val Lys Ala Ile Leu His
            405             410             415

Asp Val Cys Gly Ile Pro Pro Phe Ser Pro Gln Trp Leu Ser Arg Arg
            420             425             430

Ile Ala Gly Gly Glu Glu Ala Cys Pro His Cys Trp Pro Trp Gln Val
        435             440             445

Gly Leu Arg Phe Leu Gly Asp Tyr Gln Cys Gly Gly Ala Ile Ile Asn
    450             455             460

Pro Val Trp Ile Leu Thr Ala Ala His Cys Val Gln Leu Lys Asn Asn
465             470             475             480

Pro Leu Ser Trp Thr Ile Ile Ala Gly Asp His Asp Arg Asn Leu Lys
            485             490             495

Glu Ser Thr Glu Gln Val Arg Arg Ala Lys His Ile Ile Val His Glu
            500             505             510

Asp Phe Asn Thr Leu Ser Tyr Asp Ser Asp Ile Ala Leu Ile Gln Leu
    515             520             525

Ser Ser Pro Leu Glu Tyr Asn Ser Val Val Arg Pro Val Cys Leu Pro
    530             535             540

His Ser Ala Glu Pro Leu Phe Ser Ser Glu Ile Cys Ala Val Thr Gly
545             550             555             560
```

Trp Gly Ser Ile Ser Ala Glu Leu Ser Leu Asn Val Ser Ser Leu Asp
            565   570   575

Gly Gly Leu Ala Ser Arg Leu Gln Gln Ile Gln Val His Val Leu Glu
            580   585   590

Arg Glu Val Cys Glu His Thr Tyr Tyr Ser Ala His Pro Gly Gly Ile
            595   600   605

Thr Glu Lys Met Ile Cys Ala Gly Phe Ala Ala Ser Gly Glu Lys Asp
    610   615   620

Phe Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Arg His Glu Asn
625   630   635   640

Gly Pro Phe Val Leu Tyr Gly Ile Val Ser Trp Gly Ala Gly Cys Val
            645   650   655

Gln Pro Trp Lys Pro Gly Val Phe Ala Arg Val Met Ile Phe Leu Asp
            660   665   670

Trp Ile Gln Ser Lys Ile Asn Gly Lys Leu Phe Ser Asn Val Ile Lys
    675   680   685

Thr Ile Thr Ser Phe Phe Arg Val Gly Leu Gly Thr Val Ser Cys Cys
    690   695   700

Ser Glu Ala Glu Leu Glu Lys Pro Arg Gly Phe Phe Pro Thr Pro Arg
705   710   715   720

Tyr Leu Leu Asp Tyr Arg Gly Arg Leu Glu Cys Ser Trp Val Leu Arg
            725   730   735

Val Ser Ala Ser Ser Met Ala Lys Phe Thr Ile Glu Tyr Leu Ser Leu
            740   745   750

Leu Gly Ser Pro Val Cys Gln Asp Ser Val Leu Ile Ile Tyr Glu Glu
            755   760   765

Arg His Ser Lys Arg Lys Thr Ala Gly Gly Leu His Gly Arg Arg Leu
    770   775   780

Tyr Ser Met Thr Phe Met Ser Pro Gly Pro Leu Val Arg Val Thr Phe
785   790   795   800

His Ala Leu Val Arg Gly Ala Phe Gly Ile Ser Tyr Ile Val Leu Lys
            805   810   815

Val Leu Gly Pro Lys Asp Ser Lys Ile Thr Arg Leu Ser Gln Ser Ser
            820   825   830

Asn Arg Glu His Leu Val Pro Cys Glu Asp Val Leu Leu Thr Lys Pro
    835   840   845

Glu Gly Ile Met Gln Ile Pro Arg Asn Ser His Arg Thr Thr Met Gly
    850   855   860

```
Cys Gln Trp Arg Leu Val Ala Pro Leu Asn His Ile Ile Gln Leu Asn
865             870             875             880

Ile Ile Asn Phe Pro Met Lys Pro Thr Thr Phe Val Cys His Gly His
                885             890             895

Leu Arg Val Tyr Glu Gly Phe Gly Pro Gly Lys Lys Leu Ile Gly Arg
                900             905             910

Met Leu Met Ser Thr Glu Leu Ser Trp Phe Leu Ser Gln Phe Ser Thr
            915             920             925

Lys Lys Thr Thr Ala Ser Cys Gly Glu Thr Ala Val Ser Met Lys Met
    930             935             940

Met Tyr Thr Ser Ile Phe Leu Ala Leu Gln Asn Thr Cys Tyr His Ala
945             950             955             960

Leu Pro His Glu Val Val Leu Arg Ile Lys
                965             970
```

<210> 102
<211> 265
<212> PRT
<213> Homo sapiens

<400> 102
```
Met Lys Tyr Val Phe Tyr Leu Gly Val Leu Ala Gly Thr Phe Phe Phe
 1               5               10              15

Ala Asp Ser Ser Val Gln Lys Glu Asp Pro Ala Pro Tyr Leu Val Tyr
            20              25              30

Leu Lys Ser His Phe Asn Pro Cys Val Gly Val Leu Ile Lys Pro Ser
        35              40              45

Trp Val Leu Ala Pro Ala His Cys Tyr Leu Pro Asn Leu Lys Val Met
    50              55              60

Leu Gly Asn Phe Lys Ser Arg Val Arg Asp Gly Thr Glu Gln Thr Ile
65              70              75              80

Asn Pro Ile Gln Ile Val Arg Tyr Trp Asn Tyr Ser His Ser Ala Pro
                85              90              95

Gln Asp Asp Leu Met Leu Ile Lys Leu Ala Lys Pro Ala Met Leu Asn
            100             105             110

Pro Lys Val Gln Pro Leu Thr Leu Ala Thr Thr Asn Val Arg Pro Gly
        115             120             125

Thr Val Cys Leu Leu Ser Gly Leu Asp Trp Ser Gln Glu Asn Ser Gly
    130             135             140

Leu Trp Gln Leu Glu Pro Pro Gly His Leu Thr Leu His Arg Gly Pro
145             150             155             160
```

```
Ala Ile Pro Asp Trp Gln Arg His Asn Ser His Glu Gln Gly Arg His
            165             170             175

Pro Asp Leu Arg Gln Asn Leu Glu Ala Pro Val Met Ser Asp Arg Glu
            180             185             190

Cys Gln Lys Thr Glu Gln Gly Lys Ser His Arg Asn Ser Leu Cys Val
        195             200             205

Lys Phe Val Lys Val Phe Ser Arg Ile Phe Gly Glu Val Ala Val Ala
    210             215             220

Thr Val Ile Cys Lys Asp Lys Leu Gln Gly Ile Glu Val Gly His Phe
225             230             235             240

Met Gly Gly Asp Val Gly Ile Tyr Thr Asn Val Tyr Lys Tyr Val Ser
            245             250             255

Trp Ile Glu Asn Thr Ala Lys Asp Lys
            260             265
```

<210> 103
<211> 454
<212> PRT
<213> Homo sapiens

<400> 103
```
Met Gly Glu Asn Asp Pro Pro Ala Val Glu Ala Pro Phe Ser Phe Arg
  1             5             10             15

Ser Leu Phe Gly Leu Asp Asp Leu Lys Ile Ser Pro Val Ala Pro Asp
            20             25             30

Ala Asp Ala Val Ala Ala Gln Ile Leu Ser Leu Leu Pro Leu Lys Phe
            35             40             45

Phe Pro Ile Ile Val Ile Gly Ile Ile Ala Leu Ile Leu Ala Leu Ala
    50             55             60

Ile Gly Leu Gly Ile His Phe Asp Cys Ser Gly Lys Tyr Arg Cys Arg
65             70             75             80

Ser Ser Phe Lys Cys Ile Glu Leu Ile Ala Arg Cys Asp Gly Val Ser
            85             90             95

Asp Cys Lys Asp Gly Glu Asp Glu Tyr Arg Cys Val Arg Val Gly Gly
            100             105             110

Gln Asn Ala Val Leu Gln Val Phe Thr Ala Ala Ser Trp Lys Thr Met
        115             120             125

Cys Ser Asp Asp Trp Lys Gly His Tyr Ala Asn Val Ala Cys Ala Gln
    130             135             140

Leu Gly Phe Pro Ser Tyr Val Ser Ser Asp Asn Leu Arg Val Ser Ser
145             150             155             160
```

Leu Glu Gly Gln Phe Arg Glu Glu Phe Val Ser Ile Asp His Leu Leu
                165   170   175

Pro Asp Asp Lys Val Thr Ala Leu His His Ser Val Tyr Val Arg Glu
                180   185   190

Gly Cys Ala Ser Gly His Val Val Thr Leu Gln Cys Thr Ala Cys Gly
            195   200   205

His Arg Arg Gly Tyr Ser Ser Arg Ile Val Gly Gly Asn Met Ser Leu
    210   215   220

Leu Ser Gln Trp Pro Trp Gln Ala Ser Leu Gln Phe Gln Gly Tyr His
225   230   235   240

Leu Cys Gly Gly Ser Val Ile Thr Pro Leu Trp Ile Ile Thr Ala Ala
                245   250   255

His Cys Val Tyr Asp Leu Tyr Leu Pro Lys Ser Trp Thr Ile Gln Val
            260   265   270

Gly Leu Val Ser Leu Leu Asp Asn Pro Ala Pro Ser His Leu Val Glu
            275   280   285

Lys Ile Val Tyr His Ser Lys Tyr Lys Pro Lys Arg Leu Gly Asn Asp
    290   295   300

Ile Ala Leu Met Lys Leu Ala Gly Pro Leu Thr Phe Asn Glu Met Ile
305   310   315   320

Gln Pro Val Cys Leu Pro Asn Ser Glu Glu Asn Phe Pro Asp Gly Lys
                325   330   335

Val Cys Trp Thr Ser Gly Trp Gly Ala Thr Glu Asp Gly Ala Gly Asp
                340   345   350

Ala Ser Pro Val Leu Asn His Ala Ala Val Pro Leu Ile Ser Asn Lys
            355   360   365

Ile Cys Asn His Arg Asp Val Tyr Gly Gly Ile Ile Ser Pro Ser Met
    370   375   380

Leu Cys Ala Gly Tyr Leu Thr Gly Gly Val Asp Ser Cys Gln Gly Asp
385   390   395   400

Ser Gly Gly Pro Leu Val Cys Gln Glu Arg Arg Leu Trp Lys Leu Val
                405   410   415

Gly Ala Thr Ser Phe Gly Ile Gly Cys Ala Glu Val Asn Lys Pro Gly
            420   425   430

Val Tyr Thr Arg Val Thr Ser Phe Leu Asp Trp Ile His Glu Gln Met
            435   440   445

Glu Arg Asp Leu Lys Thr
450

<210> 104
<211> 537
<212> PRT
<213> Homo sapiens

<400> 104

```
Met Glu Arg Asp Ser His Gly Asn Ala Ser Pro Ala Arg Thr Pro Ser
 1               5                  10                  15

Ala Gly Ala Ser Pro Ala Gln Ala Ser Pro Ala Gly Thr Pro Pro Gly
            20                  25                  30

Arg Ala Ser Pro Ala Gln Ala Ser Pro Ala Gln Ala Ser Pro Ala Gly
        35                  40                  45

Thr Pro Pro Gly Arg Ala Ser Pro Ala Gln Ala Ser Pro Ala Gly Thr
    50                  55                  60

Pro Pro Gly Arg Ala Ser Pro Gly Arg Ala Ser Pro Ala Gln Ala Ser
65                  70                  75                  80

Pro Ala Gln Ala Ser Pro Ala Gln Ala Ser Pro Ala Arg Ala Ser Pro
                85                  90                  95

Ala Leu Ala Ser Leu Ser Arg Ser Ser Ser Gly Arg Ser Ser Ser Ala
            100                 105                 110

Arg Ser Ala Ser Val Thr Thr Ser Pro Thr Arg Val Tyr Leu Val Arg
        115                 120                 125

Ala Thr Pro Val Gly Ala Val Pro Ile Arg Ser Ser Pro Ala Arg Ser
    130                 135                 140

Ala Pro Ala Thr Arg Ala Thr Arg Glu Ser Pro Val Gln Phe Trp Gln
145                 150                 155                 160

Gly His Thr Gly Ile Arg Tyr Lys Glu Gln Arg Glu Ser Cys Pro Lys
                165                 170                 175

His Ala Val Arg Cys Asp Gly Val Val Asp Cys Lys Leu Lys Ser Asp
            180                 185                 190

Glu Leu Gly Cys Val Arg Phe Asp Trp Asp Lys Ser Leu Leu Lys Ile
        195                 200                 205

Tyr Ser Gly Ser Ser His Gln Trp Leu Pro Ile Cys Ser Ser Asn Trp
    210                 215                 220

Asn Asp Ser Tyr Ser Glu Lys Thr Cys Gln Gln Leu Gly Phe Glu Ser
225                 230                 235                 240

Ala His Arg Thr Thr Glu Val Ala His Arg Asp Phe Ala Asn Ser Phe
                245                 250                 255

Ser Ile Leu Arg Tyr Asn Ser Thr Ile Gln Glu Ser Leu His Arg Ser
            260                 265                 270
```

```
Glu Cys Pro Ser Gln Arg Tyr Ile Ser Leu Gln Cys Ser His Cys Gly
        275                 280             285

Leu Arg Ala Met Thr Gly Arg Ile Val Gly Gly Ala Leu Ala Ser Asp
        290             295             300

Ser Lys Trp Pro Trp Gln Val Ser Leu His Phe Gly Thr Thr His Ile
305                 310             315                 320

Cys Gly Gly Thr Leu Ile Asp Ala Gln Trp Val Leu Thr Ala Ala His
            325             330             335

Cys Phe Phe Val Thr Arg Glu Lys Val Leu Glu Gly Trp Lys Val Tyr
            340             345             350

Ala Gly Thr Ser Asn Leu His Gln Leu Pro Glu Ala Ala Ser Ile Ala
        355             360 ·           365

Glu Ile Ile Ile Asn Ser Asn Tyr Thr Asp Glu Glu Asp Asp Tyr Asp
    370             375             380

Ile Ala Leu Met Arg Leu Ser Lys Pro Leu Thr Leu Ser Ala His Ile
385             390             395                 400

His Pro Ala Cys Leu Pro Met His Gly Gln Thr Phe Ser Leu Asn Glu
            405             410             415

Thr Cys Trp Ile Thr Gly Phe Gly Lys Thr Arg Glu Thr Asp Asp Lys
            420             425             430

Thr Ser Pro Phe Leu Arg Glu Val Gln Val Asn Leu Ile Asp Phe Lys
        435             440             445

Lys Cys Asn Asp Tyr Leu Val Tyr Asp Ser Tyr Leu Thr Pro Arg Met
    450             455             460

Met Cys Ala Gly Asp Leu Arg Gly Gly Arg Asp Ser Cys Gln Gly Asp
465             470             475             480

Ser Gly Gly Pro Leu Val Cys Glu Gln Asn Asn Arg Trp Tyr Leu Ala
            485             490             495

Gly Val Thr Ser Trp Gly Thr Gly Cys Gly Gln Arg Asn Lys Pro Gly
            500             505             510

Val Tyr Thr Lys Val Thr Glu Val Leu Pro Trp Ile Tyr Ser Lys Met
        515             520             525

Glu Ser Glu Val Arg Phe Arg Lys Ser
    530             535
```

<210> 105
<211> 326
<212> PRT
<213> Homo sapiens

<400> 105

```
Met Ala Ala Pro Ala Ser Val Met Gly Pro Leu Gly Pro Ser Ala Leu
 1               5                  10                  15

Gly Leu Leu Leu Leu Leu Leu Val Val Ala Pro Pro Arg Val Ala Ala
            20                  25                  30

Leu Val His Arg Gln Pro Glu Asn Gln Gly Ile Ser Leu Thr Gly Ser
        35                  40                  45

Val Ala Cys Gly Arg Pro Ser Met Glu Gly Lys Ile Leu Gly Gly Val
    50                  55                  60

Pro Ala Pro Glu Arg Lys Trp Pro Trp Gln Val Ser Val His Tyr Ala
65                  70                  75                  80

Gly Leu His Val Cys Gly Gly Ser Ile Leu Asn Glu Tyr Trp Val Leu
                85                  90                  95

Ser Ala Ala His Cys Phe His Arg Asp Lys Asn Ile Lys Ile Tyr Asp
            100                 105                 110

Met Tyr Val Gly Leu Val Asn Leu Arg Val Ala Gly Asn His Thr Gln
        115                 120                 125

Trp Tyr Glu Val Asn Arg Val Ile Leu His Pro Thr Tyr Glu Met Tyr
    130                 135                 140

His Pro Ile Gly Gly Asp Val Ala Leu Val Gln Leu Lys Thr Arg Ile
145                 150                 155                 160

Val Phe Ser Glu Ser Val Leu Pro Val Cys Leu Ala Thr Pro Glu Val
            165                 170                 175

Asn Leu Thr Ser Ala Asn Cys Trp Ala Thr Gly Trp Gly Leu Val Ser
            180                 185                 190

Lys Gln Gly Glu Thr Ser Asp Glu Leu Gln Glu Val Gln Leu Pro Leu
        195                 200                 205

Ile Leu Glu Pro Trp Cys His Leu Leu Tyr Gly His Met Ser Tyr Ile
    210                 215                 220

Met Pro Asp Met Leu Cys Ala Gly Asp Ile Leu Asn Ala Lys Thr Val
225                 230                 235                 240

Cys Glu Gly Asp Ser Gly Gly Pro Leu Val Cys Glu Phe Asn Arg Ser
            245                 250                 255

Trp Leu Gln Ile Gly Ile Val Ser Trp Gly Arg Gly Cys Ser Asn Pro
            260                 265                 270

Leu Tyr Pro Gly Val Tyr Ala Ser Val Ser Tyr Phe Ser Lys Trp Ile
        275                 280                 285

Cys Asp Asn Ile Glu Ile Thr Pro Thr Pro Ala Gln Pro Ala Pro Ala
    290                 295                 300
```

Leu Ser Pro Ala Leu Gly Pro Thr Leu Ser Val Leu Met Ala Met Leu
305   310   315   320

Ala Gly Trp Ser Val Leu
             325

<210> 106
<211> 556
<212> PRT
<213> Homo sapiens

<400> 106
Met Ser Leu Lys Met Leu Ile Ser Arg Asn Lys Leu Ile Leu Leu Leu
  1   5   10   15

Gly Ile Val Phe Phe Glu Arg Gly Lys Ser Ala Thr Leu Ser Leu Pro
             20   25   30

Lys Ala Pro Ser Cys Gly Gln Ser Leu Val Lys Val Gln Pro Trp Asn
         35   40   45

Tyr Phe Asn Ile Phe Ser Arg Ile Leu Gly Gly Ser Gln Val Glu Lys
     50   55   60

Gly Ser Tyr Pro Trp Gln Val Ser Leu Lys Gln Arg Gln Lys His Ile
 65   70   75   80

Cys Gly Gly Ser Ile Val Ser Pro Gln Trp Val Ile Thr Ala Ala His
             85   90   95

Cys Ile Ala Asn Arg Asn Ile Val Ser Thr Leu Asn Val Thr Ala Gly
         100   105   110

Glu Tyr Asp Leu Ser Gln Thr Asp Pro Gly Glu Gln Thr Leu Thr Ile
     115   120   125

Glu Thr Val Ile Ile His Pro His Phe Ser Thr Lys Lys Pro Met Asp
     130   135   140

Tyr Asp Ile Ala Leu Leu Lys Met Ala Gly Ala Phe Gln Phe Gly His
145   150   155   160

Phe Val Gly Pro Ile Cys Leu Pro Glu Leu Arg Glu Gln Phe Glu Ala
             165   170   175

Gly Phe Ile Cys Thr Thr Ala Gly Trp Gly Arg Leu Thr Glu Gly Gly
         180   185   190

Val Leu Ser Gln Val Leu Gln Glu Val Asn Leu Pro Ile Leu Thr Trp
         195   200   205

Glu Glu Cys Val Ala Ala Leu Leu Thr Leu Lys Arg Pro Ile Ser Gly
     210   215   220

Lys Thr Phe Leu Cys Thr Gly Phe Pro Asp Gly Gly Arg Asp Ala Cys
225   230   235   240

Gln Gly Asp Ser Gly Gly Ser Leu Met Cys Arg Asn Lys Lys Gly Ala
            245   250   255

Trp Asp Ser Gly Trp Ser Ile Trp Glu Ala Gln Val Gly Gly Ser Leu
            260   265   270

Glu Ser Arg Ser Ser Arg Pro Ser Leu Gly Asn Lys Val Arg Leu Cys
            275   280   285

Leu Thr Asn Asn Phe Phe Lys Lys Leu Ala Gly Cys Gly Thr Trp Cys
    290   295   300

Ser Glu Gln Asp Val Ile Val Ser Gly Ala Glu Gly Lys Leu His Phe
305   310   315   320

Pro Glu Ser Leu His Leu Tyr Tyr Glu Ser Lys Gln Arg Cys Val Trp
            325   330   335

Thr Leu Leu Val Pro Glu Glu Met His Val Leu Leu Ser Phe Ser His
            340   345   350

Leu Asp Val Glu Ser Cys His His Ser Tyr Leu Ser Met Tyr Ser Leu
            355   360   365

Glu Asp Arg Pro Ile Gly Lys Phe Cys Gly Glu Ser Leu Pro Ser Ser
    370   375   380

Ile Leu Ile Gly Ser Asn Ser Leu Arg Leu Lys Phe Val Ser Asp Ala
385   390   395   400

Thr Asp Tyr Ala Ala Gly Phe Asn Leu Thr Tyr Lys Ala Leu Lys Pro
            405   410   415

Asn Tyr Ile Pro Gly Cys Ser Tyr Leu Thr Val Leu Phe Glu Glu Gly
            420   425   430

Leu Ile Gln Ser Leu Asn Tyr Pro Glu Asn Tyr Ser Asp Lys Ala Asn
            435   440   445

Cys Asp Trp Ile Phe Gln Ala Ser Lys His His Leu Ile Lys Leu Ser
    450   455   460

Phe Gln Ser Leu Glu Ile Glu Glu Ser Gly Asp Cys Thr Ser Asp Tyr
465   470   475   480

Val Thr Val His Ser Asp Val Glu Arg Lys Lys Glu Ile Ala Arg Leu
            485   490   495

Cys Gly Tyr Asp Val Pro Thr Pro Val Leu Ser Pro Ser Ser Ile Met
            500   505   510

Leu Ile Ser Phe His Ser Asp Glu Asn Gly Thr Cys Arg Gly Phe Gln
            515   520   525

Ala Ile Val Ser Phe Ile Pro Lys Ala Val Tyr Pro Asp Leu Asn Ile
    530   535   540

```
Ser Ile Ser Glu Asp Glu Ser Met Phe Leu Glu Thr
545             550             555
```

```
<210> 107
<211> 298
<212> PRT
<213> Homo sapiens
```

```
<400> 107
Arg Trp Pro Trp Gln Ala Ser Leu Leu Tyr Leu Gly Gly His Ile Cys
 1               5               10              15
```

```
Gly Ala Ala Leu Ile Asp Ser Asn Trp Val Ala Ser Ala Ala His Cys
            20              25              30
```

```
Phe Gln Arg Cys Ile Phe Pro Pro Arg Ala Pro Leu Ser Thr Asn Pro
        35              40              45
```

```
Ser Asp Tyr Arg Ile Leu Leu Gly Tyr Asp Gln Gln Ser His Pro Thr
    50              55              60
```

```
Glu His Ser Lys Gln Met Thr Val Asn Lys Ile Met Val His Ala Asp
65              70              75              80
```

```
Tyr Asn Glu Leu His Arg Met Gly Ser Asp Ile Thr Leu Leu Gln Leu
            85              90              95
```

```
His His His Val Glu Phe Ser Ser His Ile Leu Pro Ala Cys Leu Pro
        100             105             110
```

```
Glu Pro Thr Thr Trp Leu Ala Pro Asp Ser Ser Cys Trp Ile Ser Gly
    115             120             125
```

```
Trp Gly Met Val Thr Glu Asp Val Phe Leu Pro Glu Pro Phe Gln Leu
    130             135             140
```

```
Gln Glu Ala Glu Val Gly Val Met Asp Asn Thr Val Cys Gly Ser Phe
145             150             155             160
```

```
Phe Gln Pro Gln Tyr Pro Gly Gln Pro Ser Ser Ser Asp Tyr Thr Ile
            165             170             175
```

```
His Glu Asp Met Leu Cys Ala Gly Asp Leu Ile Thr Gly Lys Ala Ile
            180             185             190
```

```
Cys Arg Val Asn Ser Arg Gly Pro Leu Val Cys Pro Leu Asn Gly Thr
        195             200             205
```

```
Trp Phe Leu Met Gly Leu Ser Ser Trp Ser Leu Asp Cys Cys Ser Pro
    210             215             220
```

```
Val Gly Pro Arg Val Phe Thr Arg Leu Pro Tyr Phe Thr Asn Trp Ile
225             230             235             240
```

```
Ser Gln Lys Lys Arg Glu Ser Thr Pro Pro Asp Pro Ala Leu Ala Pro
            245             250             255
```

Pro Gln Glu Thr Pro Pro Ala Leu Asp Ser Met Thr Ser Gln Gly Ile
        260   265   270

Val His Lys Pro Gly Leu Cys Ala Ala Leu Leu Ala Ala His Met Phe
        275   280   285

Leu Leu Leu Leu Ile Leu Leu Gly Ser Leu
        290   295

<210> 108
<211> 850
<212> PRT
<213> Homo sapiens

<400> 108
Met Asp Lys Glu Asn Ser Asp Val Ser Ala Ala Pro Ala Asp Leu Lys
  1   5   10   15

Ile Ser Asn Ile Ser Val Gln Val Val Ser Ala Gln Lys Lys Leu Pro
        20   25   30

Val Arg Arg Pro Pro Leu Pro Gly Arg Arg Leu Pro Leu Pro Gly Arg
      35   40   45

Arg Pro Pro Gln Arg Pro Ile Gly Lys Ala Lys Pro Lys Lys Gln Ser
     50   55   60

Lys Lys Lys Val Pro Phe Trp Asn Val Gln Asn Lys Ile Ile Leu Phe
65   70   75   80

Thr Val Phe Leu Phe Ile Leu Ala Val Ile Ala Trp Thr Leu Leu Trp
        85   90   95

Leu Tyr Ile Ser Lys Thr Glu Ser Lys Asp Ala Phe Tyr Phe Ala Gly
        100   105   110

Met Phe Arg Ile Thr Asn Ile Glu Phe Leu Pro Glu Tyr Arg Gln Lys
        115   120   125

Glu Ser Arg Glu Phe Leu Ser Val Ser Arg Thr Val Gln Gln Val Ile
        130   135   140

Asn Leu Val Tyr Thr Thr Ser Ala Phe Ser Lys Phe Tyr Glu Gln Ser
145   150   155   160

Val Val Ala Asp Val Ser Ser Asn Asn Lys Gly Gly Leu Leu Val His
        165   170   175

Phe Trp Ile Val Phe Val Met Pro Arg Ala Lys Gly His Ile Phe Cys
        180   185   190

Glu Asp Cys Val Ala Ala Ile Leu Lys Asp Ser Ile Gln Thr Ser Ile
        195   200   205

Ile Asn Arg Thr Ser Val Gly Ser Leu Gln Gly Leu Ala Val Asp Met
        210   215   220

Asp Ser Val Val Leu Asn Gly Asp Cys Trp Ser Phe Leu Lys Lys Lys
225   230   235   240

Lys Arg Lys Glu Asn Gly Ala Val Ser Thr Asp Lys Gly Cys Ser Gln
            245   250   255

Tyr Phe Tyr Ala Glu His Leu Ser Leu His Tyr Pro Leu Glu Ile Ser
        260   265   270

Ala Ala Ser Gly Arg Leu Met Cys His Phe Lys Leu Val Ala Ile Val
        275   280   285

Gly Tyr Leu Ile Arg Leu Ser Ile Lys Ser Ile Gln Ile Glu Ala Asp
    290   295   300

Asn Cys Val Thr Asp Ser Leu Thr Ile Tyr Asp Ser Leu Leu Pro Ile
305   310   315   320

Arg Ser Ser Ile Leu Tyr Arg Ile Cys Glu Pro Thr Arg Thr Leu Met
            325   330   335

Ser Phe Val Ser Thr Asn Asn Leu Met Leu Val Thr Phe Lys Ser Pro
            340   345   350

His Ile Arg Arg Leu Ser Gly Ile Arg Ala Tyr Phe Glu Val Ile Pro
        355   360   365

Glu Gln Lys Cys Glu Asn Thr Val Leu Val Lys Asp Ile Thr Gly Phe
    370   375   380

Glu Gly Lys Ile Ser Ser Pro Tyr Tyr Pro Ser Tyr Tyr Pro Pro Lys
385   390   395   400

Cys Lys Cys Thr Trp Lys Phe Gln Thr Ser Leu Ser Thr Leu Gly Ile
        405   410   415

Ala Leu Lys Phe Tyr Asn Tyr Ser Ile Thr Lys Lys Ser Met Lys Gly
        420   425   430

Cys Glu His Gly Trp Trp Glu Ile Asn Glu His Met Tyr Cys Gly Ser
    435   440   445

Tyr Met Asp His Gln Thr Ile Phe Arg Val Pro Ser Pro Leu Val His
    450   455   460

Ile Gln Leu Gln Cys Ser Ser Arg Leu Ser Asp Lys Pro Leu Leu Ala
465   470   475   480

Glu Tyr Gly Ser Tyr Asn Ile Ser Gln Pro Cys Pro Val Gly Ser Phe
        485   490   495

Arg Cys Ser Ser Gly Leu Cys Val Pro Gln Ala Gln Arg Cys Asp Gly
        500   505   510

Val Asn Asp Cys Phe Asp Glu Ser Asp Glu Leu Phe Cys Val Ser Pro
    515   520   525

Gln Pro Ala Cys Asn Thr Ser Ser Phe Arg Gln His Gly Pro Leu Ile
    530   535   540

Cys Asp Gly Phe Arg Asp Cys Glu Asn Gly Arg Asp Glu Gln Asn Cys
545   550   555   560

Thr Gln Ser Ile Pro Cys Asn Asn Arg Thr Phe Lys Cys Gly Asn Asp
        565   570   575

Ile Cys Phe Arg Lys Gln Asn Ala Lys Cys Asp Gly Thr Val Asp Cys
      580   585   590

Pro Asp Gly Ser Asp Glu Glu Gly Cys Thr Cys Ser Arg Ser Ser Ser
      595   600   605

Ala Leu His Arg Ile Ile Gly Gly Thr Asp Thr Leu Glu Gly Gly Trp
    610   615   620

Pro Trp Gln Val Ser Leu His Phe Val Gly Ser Ala Tyr Cys Gly Ala
625   630   635   640

Ser Val Ile Ser Arg Glu Trp Leu Leu Ser Ala Ala His Cys Phe His
        645   650   655

Gly Asn Arg Leu Ser Asp Pro Thr Pro Trp Thr Ala His Leu Gly Met
      660   665   670

Tyr Val Gln Gly Asn Ala Lys Phe Val Ser Pro Val Arg Arg Ile Val
      675   680   685

Val His Glu Tyr Tyr Asn Ser Gln Thr Phe Asp Tyr Asp Ile Ala Leu
    690   695   700

Leu Gln Leu Ser Ile Ala Trp Pro Glu Thr Leu Lys Gln Leu Ile Gln
705   710   715   720

Pro Ile Cys Ile Pro Pro Thr Gly Gln Arg Val Arg Ser Gly Glu Lys
        725   730   735

Cys Trp Val Thr Gly Trp Gly Arg Arg His Glu Ala Asp Asn Lys Gly
      740   745   750

Ser Leu Val Leu Gln Gln Ala Glu Val Glu Leu Ile Asp Gln Thr Leu
      755   760   765

Cys Val Ser Thr Tyr Gly Ile Ile Thr Ser Arg Met Leu Cys Ala Gly
    770   775   780

Ile Met Ser Gly Lys Arg Asp Ala Cys Lys Gly Asp Ser Gly Gly Pro
785   790   795   800

Leu Ser Cys Arg Arg Lys Ser Asp Gly Lys Trp Ile Leu Thr Gly Ile
      805   810   815

Val Ser Trp Gly His Gly Cys Gly Arg Pro Asn Phe Pro Gly Val Tyr
      820   825   830

Thr Arg Val Ser Asn Phe Val Pro Trp Ile His Lys Tyr Val Pro Ser
     835   840   845

Leu Leu
     850

<210> 109
<211> 447
<212> PRT
<213> Homo sapiens

<400> 109
Met Thr Leu Asn Lys Ile Lys Asp Leu Phe Ala Gly Lys Gly Gln Trp
 1   5   10   15

Asp Leu Ala Pro Glu Ala Glu Met Leu Lys Pro Trp Met Ile Ala Val
        20   25   30

Leu Ile Val Leu Ser Leu Thr Val Val Ala Val Thr Ile Gly Leu Leu
      35   40   45

Val His Phe Leu Val Phe Asp Gln Lys Lys Glu Tyr Tyr His Gly Ser
    50   55   60

Phe Lys Ile Leu Asp Pro Gln Ile Asn Asn Asn Phe Gly Gln Ser Asn
65   70   75   80

Thr Tyr Gln Leu Lys Asp Leu Arg Glu Thr Thr Glu Asn Leu Val Tyr
        85   90   95

Ser Leu Lys Met Tyr Leu Ser Phe Val Cys His Ser Pro Glu Glu Asp
      100   105   110

Gly Val Lys Val Asp Val Ile Met Val Phe Gln Phe Pro Ser Thr Glu
      115   120   125

Gln Arg Ala Val Arg Glu Lys Lys Ile Gln Ser Ile Leu Asn Gln Lys
    130   135   140

Ile Arg Asn Leu Arg Ala Leu Pro Ile Asn Ala Ser Ser Val Gln Val
145   150   155   160

Asn Val Ala Met Val Lys Asn Gly Asn Val Gly Pro Gly Ser Gly Ala
        165   170   175

Gly Glu Ala Pro Gly Leu Gly Ala Gly Pro Ala Trp Ser Pro Met Ser
        180   185   190

Ser Ser Thr Gly Glu Leu Thr Val Gln Ala Ser Cys Gly Lys Arg Val
        195   200   205

Val Pro Leu Asn Val Asn Arg Ile Ala Ser Gly Val Ile Ala Pro Lys
    210   215   220

Ala Ala Trp Pro Trp Gln Ala Ser Leu Gln Tyr Asp Asn Ile His Gln
225   230   235   240

```
Cys Gly Ala Thr Leu Ile Ser Asn Thr Trp Leu Val Thr Ala Ala His
                245             250             255

Cys Phe Gln Lys Tyr Lys Asn Pro His Gln Trp Thr Val Ser Phe Gly
                260             265             270

Thr Lys Ile Asn Pro Pro Leu Met Lys Arg Asn Val Arg Arg Phe Ile
                275             280             285

Ile His Glu Lys Tyr Arg Ser Ala Ala Arg Glu Tyr Asp Ile Ala Val
        290             295             300

Val Gln Val Ser Ser Arg Val Thr Phe Ser Asp Asp Ile Arg Gln Ile
305             310             315             320

Cys Leu Pro Glu Ala Ser Ala Ser Phe Gln Pro Asn Leu Thr Val His
                325             330             335

Ile Thr Gly Phe Gly Ala Leu Tyr Tyr Gly Gly Glu Ser Gln Asn Asp
                340             345             350

Leu Arg Glu Ala Arg Val Lys Ile Ile Ser Asp Asp Val Cys Lys Gln
                355             360             365

Pro Gln Val Tyr Gly Asn Asp Ile Lys Pro Gly Met Phe Cys Ala Gly
        370             375             380

Tyr Met Glu Gly Ile Tyr Asp Ala Cys Arg Gly Asp Ser Gly Gly Pro
385             390             395             400

Leu Val Thr Arg Asp Leu Lys Asp Thr Trp Tyr Leu Ile Gly Ile Val
                405             410             415

Ser Trp Gly Asp Asn Cys Gly Gln Lys Asp Lys Pro Gly Val Tyr Thr
                420             425             430

Gln Val Thr Tyr Tyr Arg Asn Trp Ile Ala Ser Lys Thr Gly Ile
        435             440             445
```

```
<210> 110
<211> 457
<212> PRT
<213> Homo sapiens

<400> 110
Met Ser Leu Met Leu Asp Asp Gln Pro Pro Met Glu Ala Gln Tyr Ala
  1           5               10              15

Glu Glu Gly Pro Gly Pro Gly Ile Phe Arg Ala Glu Pro Gly Asp Gln
            20              25              30

Gln His Pro Ile Ser Gln Ala Val Cys Trp Arg Ser Met Arg Arg Gly
        35              40              45

Cys Ala Val Leu Gly Ala Leu Gly Leu Leu Ala Gly Ala Gly Val Gly
        50              55              60
```

Ser Trp Leu Leu Val Leu Tyr Leu Cys Pro Ala Ala Ser Gln Pro Ile
 65   70   75   80

Ser Gly Thr Leu Gln Asp Glu Glu Ile Thr Leu Ser Cys Ser Glu Ala
             85   90   95

Ser Ala Glu Glu Ala Leu Leu Pro Ala Leu Pro Lys Thr Val Ser Phe
         100   105   110

Arg Ile Asn Ser Glu Asp Phe Leu Leu Glu Ala Gln Val Arg Asp Gln
         115   120   125

Pro Arg Trp Leu Leu Val Cys His Glu Gly Trp Ser Pro Ala Leu Gly
     130   135   140

Leu Gln Ile Cys Trp Ser Leu Gly His Leu Arg Leu Thr His His Lys
145   150   155   160

Gly Val Asn Leu Thr Asp Ile Lys Leu Asn Ser Ser Gln Glu Phe Ala
             165   170   175

Gln Leu Ser Pro Arg Leu Gly Gly Phe Leu Glu Glu Ala Trp Gln Pro
             180   185   190

Arg Asn Asn Cys Thr Ser Gly Gln Val Val Ser Leu Arg Cys Ser Glu
         195   200   205

Cys Gly Ala Arg Pro Leu Ala Ser Arg Ile Val Gly Gly Gln Ser Val
     210   215   220

Ala Pro Gly Arg Trp Pro Trp Gln Ala Ser Val Ala Leu Gly Phe Arg
225   230   235   240

His Thr Cys Gly Gly Ser Val Leu Ala Pro Arg Trp Val Val Thr Ala
             245   250   255

Ala His Cys Met His Ser Phe Arg Leu Ala Arg Leu Ser Ser Trp Arg
         260   265   270

Val His Ala Gly Leu Val Ser His Ser Ala Val Arg Pro His Gln Gly
     275   280   285

Ala Leu Val Glu Arg Ile Ile Pro His Pro Leu Tyr Ser Ala Gln Asn
     290   295   300

His Asp Tyr Asp Val Ala Leu Leu Arg Leu Gln Thr Ala Leu Asn Phe
305   310   315   320

Ser Asp Thr Val Gly Ala Val Cys Leu Pro Ala Lys Glu Gln His Phe
             325   330   335

Pro Lys Gly Ser Arg Cys Trp Val Ser Gly Trp Gly His Thr His Pro
         340   345   350

Ser His Thr Tyr Ser Ser Asp Met Leu Gln Asp Thr Val Val Pro Leu
     355   360   365

```
Phe Ser Thr Gln Leu Cys Asn Ser Ser Cys Val Tyr Ser Gly Ala Leu
    370             375             380
```

```
Thr Pro Arg Met Leu Cys Ala Gly Tyr Leu Asp Gly Arg Ala Asp Ala
385             390             395                 400
```

```
Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Pro Asp Gly Asp Thr
            405             410             415
```

```
Trp Arg Leu Val Gly Val Val Ser Trp Gly Arg Ala Cys Ala Glu Pro
            420             425             430
```

```
Asn His Pro Gly Val Tyr Ala Lys Val Ala Glu Phe Leu Asp Trp Ile
        435             440             445
```

```
His Asp Thr Ala Gln Asp Ser Leu Leu
    450             455
```

```
<210> 111
<211> 818
<212> PRT
<213> Homo sapiens
```

```
<400> 111
Met Ala Arg His Leu Leu Leu Pro Leu Val Met Leu Val Ile Ser Pro
  1             5               10                  15
```

```
Ile Pro Gly Ala Phe Gln Asp Ser Ala Leu Ser Pro Thr Gln Glu Glu
            20              25                  30
```

```
Pro Glu Asp Leu Asp Cys Gly Arg Pro Glu Pro Ser Ala Arg Ile Val
        35              40                  45
```

```
Gly Gly Ser Asn Ala Gln Pro Gly Thr Trp Pro Trp Gln Val Ser Leu
    50              55                  60
```

```
His His Gly Gly Gly His Ile Cys Gly Gly Ser Leu Ile Ala Pro Ser
65              70                  75                  80
```

```
Trp Val Leu Ser Ala Ala His Cys Phe Met Thr Asn Gly Thr Leu Glu
            85              90                  95
```

```
Pro Ala Ala Glu Trp Ser Val Leu Leu Gly Val His Ser Gln Asp Gly
            100             105             110
```

```
Pro Leu Asp Gly Ala His Thr Arg Ala Val Ala Ala Ile Val Val Pro
        115             120             125
```

```
Ala Asn Tyr Ser Gln Val Glu Leu Gly Ala Asp Leu Ala Leu Leu Arg
    130             135             140
```

```
Leu Ala Ser Pro Ala Ser Leu Gly Pro Ala Val Trp Pro Val Cys Leu
145             150             155             160
```

```
Pro Arg Ala Ser His Arg Phe Val His Gly Thr Ala Cys Trp Ala Thr
            165             170             175
```

Gly Trp Gly Asp Val Gln Glu Ala Asp Pro Leu Pro Leu Pro Trp Val
         180   185   190

Leu Gln Glu Val Glu Leu Arg Leu Leu Gly Glu Ala Thr Cys Gln Cys
     195   200   205

Leu Tyr Ser Gln Pro Gly Pro Phe Asn Leu Thr Leu Gln Ile Leu Pro
     210   215   220

Gly Met Leu Cys Ala Gly Tyr Pro Glu Gly Arg Arg Asp Thr Cys Gln
225   230   235   240

Gly Asp Ser Gly Gly Pro Leu Val Cys Glu Glu Gly Gly Arg Trp Phe
         245   250   255

Gln Ala Gly Ile Thr Ser Phe Gly Phe Gly Cys Gly Arg Arg Asn Arg
         260   265   270

Pro Gly Val Phe Thr Ala Val Ala Thr Tyr Glu Ala Trp Ile Arg Glu
         275   280   285

Gln Val Met Gly Ser Glu Pro Gly Pro Ala Phe Pro Thr Gln Pro Gln
     290   295   300

Lys Thr Gln Ser Asp Pro Gln Glu Pro Arg Glu Glu Asn Cys Thr Ile
305   310   315   320

Ala Leu Pro Glu Cys Gly Lys Ala Pro Arg Pro Gly Ala Trp Pro Trp
         325   330   335

Glu Ala Gln Val Met Val Pro Gly Ser Arg Pro Cys His Gly Ala Leu
         340   345   350

Val Ser Glu Ser Trp Val Leu Ala Pro Ala Ser Cys Phe Leu Asp Pro
         355   360   365

Asn Ser Ser Asp Ser Pro Pro Arg Asp Leu Asp Ala Trp Arg Val Leu
     370   375   380

Leu Pro Ser Arg Pro Arg Ala Glu Arg Val Ala Arg Leu Val Gln His
385   390   395   400

Glu Asn Ala Ser Trp Asp Asn Ala Ser Asp Leu Ala Leu Leu Gln Leu
         405   410   415

Arg Thr Pro Val Asn Leu Ser Ala Ala Ser Arg Pro Val Cys Leu Pro
         420   425   430

His Pro Glu His Tyr Phe Leu Pro Gly Ser Arg Cys Arg Leu Ala Arg
     435   440   445

Trp Gly Arg Gly Glu Pro Ala Leu Gly Pro Gly Ala Leu Leu Glu Ala
     450   455   460

Glu Leu Leu Gly Gly Trp Trp Cys His Cys Leu Tyr Gly Arg Gln Gly
465   470   475   480

Ala Ala Val Pro Leu Pro Gly Asp Pro Pro His Ala Leu Cys Pro Ala
             485   490   495

Tyr Gln Glu Lys Glu Glu Val Gly Ser Cys Trp Thr His Gly Pro Trp
             500   505   510

Ile Ser His Val Thr Arg Gly Ala Tyr Leu Glu Asp Gln Leu Ala Trp
           515   520   525

Asp Trp Gly Pro Asp Gly Glu Glu Thr Glu Thr Gln Thr Cys Pro Pro
   530   535   540

His Thr Glu His Gly Ala Cys Gly Leu Arg Leu Glu Ala Ala Pro Val
545   550   555   560

Gly Val Leu Trp Pro Trp Leu Ala Glu Val His Val Ala Gly Asp Arg
           565   570   575

Val Cys Thr Gly Ile Leu Leu Ala Pro Gly Trp Val Leu Ala Ala Thr
           580   585   590

His Cys Val Leu Arg Pro Gly Ser Thr Thr Val Pro Tyr Ile Glu Val
           595   600   605

Tyr Leu Gly Arg Ala Gly Ala Ser Ser Leu Pro Gln Gly His Gln Val
      610   615   620

Ser Arg Leu Val Ile Ser Ile Arg Leu Pro Gln His Leu Gly Leu Arg
625   630   635   640

Pro Pro Leu Ala Leu Leu Glu Leu Ser Ser Arg Val Glu Pro Ser Pro
           645   650   655

Ser Ala Leu Pro Ile Cys Leu His Pro Ala Gly Ile Pro Pro Gly Ala
           660   665   670

Ser Cys Trp Val Leu Gly Trp Lys Glu Pro Gln Asp Arg Val Pro Val
      675   680   685

Ala Ala Ala Val Ser Ile Leu Thr Gln Arg Ile Cys Asp Cys Leu Tyr
   690   695   700

Gln Gly Ile Leu Pro Pro Gly Thr Leu Cys Val Leu Tyr Ala Glu Gly
705   710   715   720

Gln Glu Asn Arg Cys Glu Met Thr Ser Ala Pro Pro Leu Leu Cys Gln
           725   730   735

Met Thr Glu Gly Ser Trp Ile Leu Val Gly Met Ala Val Gln Gly Ser
           740   745   750

Arg Glu Leu Phe Ala Ala Ile Gly Pro Glu Glu Ala Trp Ile Ser Gln
      755   760   765

Thr Val Gly Glu Ala Asn Phe Leu Pro Pro Ser Gly Ser Pro His Trp
   770   775   780

Pro Thr Gly Gly Ser Asn Leu Cys Pro Pro Glu Leu Ala Lys Ala Ser
785   790   795   800

Gly Ser Pro His Ala Val Tyr Phe Leu Leu Leu Leu Thr Leu Leu Ile
            805   810   815

Gln Ser

<210> 112
<211> 284
<212> PRT
<213> Homo sapiens

<400> 112
Ala Met Gly Leu Gly Leu Arg Gly Trp Gly Arg Pro Leu Leu Thr Val
  1   5   10   15

Ala Thr Ala Leu Met Leu Pro Val Lys Pro Pro Ala Gly Ser Trp Gly
            20   25   30

Ala Gln Ile Ile Gly Gly His Glu Val Thr Pro His Ser Arg Pro Tyr
        35   40   45

Met Ala Ser Val Arg Phe Gly Gly Gln His His Cys Gly Gly Phe Leu
      50   55   60

Leu Arg Ala Arg Trp Val Val Ser Ala Ala His Cys Phe Ser His Arg
  65   70   75   80

Asp Leu Arg Thr Gly Leu Val Val Leu Gly Ala His Val Leu Ser Thr
            85   90   95

Ala Glu Pro Thr Gln Gln Val Phe Gly Ile Asp Ala Leu Thr Thr His
            100   105   110

Pro Asp Tyr His Pro Met Thr His Ala Asn Asp Ile Cys Leu Leu Gln
        115   120   125

Leu Asn Gly Ser Ala Val Leu Gly Pro Ala Val Gly Leu Leu Arg Leu
    130   135   140

Pro Gly Arg Arg Ala Arg Pro Pro Thr Ala Gly Thr Arg Cys Arg Val
145   150   155   160

Ala Gly Trp Gly Phe Val Ser Asp Phe Glu Glu Leu Pro Pro Gly Leu
            165   170   175

Met Glu Ala Lys Val Arg Val Leu Asp Pro Asp Val Cys Asn Ser Ser
            180   185   190

Trp Lys Gly His Leu Thr Leu Thr Met Leu Cys Thr Arg Ser Gly Asp
        195   200   205

Ser His Arg Arg Gly Phe Cys Ser Ala Asp Ser Gly Gly Pro Leu Val
    210   215   220

```
Cys Arg Asn Arg Ala His Gly Leu Val Ser Phe Ser Gly Leu Trp Cys
225             230             235             240

Gly Asp Pro Lys Thr Pro Asp Val Tyr Thr Gln Val Ser Ala Phe Val
            245             250             255

Ala Trp Ile Trp Asp Val Val Arg Arg Ser Ser Pro Gln Pro Gly Pro
            260             265             270

Leu Pro Gly Thr Thr Arg Pro Pro Gly Glu Ala Ala
        275             280
```

<210> 113
<211> 802
<212> PRT
<213> Homo sapiens

<400> 113
```
Met Pro Val Ala Glu Ala Pro Gln Val Ala Gly Gly Gln Gly Asp Gly
 1               5               10              15

Gly Asp Gly Glu Glu Ala Glu Pro Glu Gly Met Phe Lys Ala Cys Glu
            20              25              30

Asp Ser Lys Arg Lys Ala Arg Gly Tyr Leu Arg Leu Val Pro Leu Phe
        35              40              45

Val Leu Leu Ala Leu Leu Val Leu Ala Ser Ala Gly Val Leu Leu Trp
    50              55              60

Tyr Phe Leu Gly Tyr Lys Ala Glu Val Met Val Ser Gln Val Tyr Ser
65              70              75              80

Gly Ser Leu Arg Val Leu Asn Arg His Phe Ser Gln Asp Leu Thr Arg
            85              90              95

Arg Glu Ser Ser Ala Phe Arg Ser Glu Thr Ala Lys Ala Gln Lys Met
            100             105             110

Leu Lys Glu Leu Ile Thr Ser Thr Arg Leu Gly Thr Tyr Tyr Asn Ser
        115             120             125

Ser Ser Val Tyr Ser Phe Gly Glu Gly Pro Leu Thr Cys Phe Phe Trp
    130             135             140

Phe Ile Leu Gln Ile Pro Glu His Arg Arg Leu Met Leu Ser Pro Glu
145             150             155             160

Val Val Gln Ala Leu Leu Val Glu Glu Leu Leu Ser Thr Val Asn Ser
            165             170             175

Ser Ala Ala Val Pro Tyr Arg Ala Glu Tyr Glu Val Asp Pro Glu Gly
            180             185             190

Leu Val Ile Leu Glu Ala Ser Val Lys Asp Ile Ala Ala Leu Asn Ser
        195             200             205
```

Thr Leu Gly Cys Tyr Arg Tyr Ser Tyr Val Gly Gln Gly Gln Val Leu
    210   215   220

Arg Leu Lys Gly Pro Asp His Leu Ala Ser Ser Cys Leu Trp His Leu
225   230   235   240

Gln Gly Pro Lys Asp Leu Met Leu Lys Leu Arg Leu Glu Trp Thr Leu
          245   250   255

Ala Glu Cys Arg Asp Arg Leu Ala Met Tyr Asp Val Ala Gly Pro Leu
         260   265   270

Glu Lys Arg Leu Ile Thr Ser Val Tyr Gly Cys Ser Arg Gln Glu Pro
        275   280   285

Val Val Glu Val Leu Ala Ser Gly Ala Ile Met Ala Val Val Trp Lys
    290   295   300

Lys Gly Leu His Ser Tyr Tyr Asp Pro Phe Val Leu Ser Val Gln Pro
305   310   315   320

Val Val Phe Gln Ala Cys Glu Val Asn Leu Thr Leu Asp Asn Arg Leu
         325   330   335

Asp Ser Gln Gly Val Leu Ser Thr Pro Tyr Phe Pro Ser Tyr Tyr Ser
         340   345   350

Pro Gln Thr His Cys Ser Trp His Leu Thr Val Pro Ser Leu Asp Tyr
        355   360   365

Gly Leu Ala Leu Trp Phe Asp Ala Tyr Ala Leu Arg Arg Gln Lys Tyr
    370   375   380

Asp Leu Pro Cys Thr Gln Gly Gln Trp Thr Ile Gln Asn Arg Arg Leu
385   390   395   400

Cys Gly Leu Arg Ile Leu Gln Pro Tyr Ala Glu Arg Ile Pro Val Val
         405   410   415

Ala Thr Ala Gly Ile Thr Ile Asn Phe Thr Ser Gln Ile Ser Leu Thr
         420   425   430

Gly Pro Gly Val Arg Val His Tyr Gly Leu Tyr Asn Gln Ser Asp Pro
      435   440   445

Cys Pro Gly Glu Phe Leu Cys Ser Val Asn Gly Leu Cys Val Pro Ala
    450   455   460

Cys Asp Gly Val Lys Asp Cys Pro Asn Gly Leu Asp Glu Arg Asn Cys
465   470   475   480

Val Cys Arg Ala Thr Phe Gln Cys Lys Glu Asp Ser Thr Cys Ile Ser
         485   490   495

Leu Pro Lys Val Cys Asp Gly Gln Pro Asp Cys Leu Asn Gly Ser Asp
         500   505   510

```
Glu Glu Gln Cys Gln Glu Gly Val Pro Cys Gly Thr Phe Thr Phe Gln
        515             520         525

Cys Glu Asp Arg Ser Cys Val Lys Lys Pro Asn Pro Gln Cys Asp Gly
        530             535             540

Arg Pro Asp Cys Arg Asp Gly Ser Asp Glu Glu His Cys Asp Cys Gly
545             550             555             560

Leu Gln Gly Pro Ser Ser Arg Ile Val Gly Gly Ala Val Ser Ser Glu
            565             570             575

Gly Glu Trp Pro Trp Gln Ala Ser Leu Gln Val Arg Gly Arg His Ile
            580             585             590

Cys Gly Gly Ala Leu Ile Ala Asp Arg Trp Val Ile Thr Ala Ala His
        595             600             605

Cys Phe Gln Glu Asp Ser Met Ala Ser Thr Val Leu Trp Thr Val Phe
        610             615             620

Leu Gly Lys Val Trp Gln Asn Ser Arg Trp Pro Gly Glu Val Ser Phe
625             630             635             640

Lys Val Ser Arg Leu Leu Leu His Pro Tyr His Glu Glu Asp Ser His
            645             650             655

Asp Tyr Asp Val Ala Leu Leu Gln Leu Asp His Pro Val Val Arg Ser
            660             665             670

Ala Ala Val Arg Pro Val Cys Leu Pro Ala Arg Ser His Phe Phe Glu
        675             680             685

Pro Gly Leu His Cys Trp Ile Thr Gly Trp Gly Ala Leu Arg Glu Gly
        690             695             700

Gly Pro Ile Ser Asn Ala Leu Gln Lys Val Asp Val Gln Leu Ile Pro
705             710             715             720

Gln Asp Leu Cys Ser Glu Ala Tyr Arg Tyr Gln Val Thr Pro Arg Met
            725             730             735

Leu Cys Ala Gly Tyr Arg Lys Gly Lys Lys Asp Ala Cys Gln Gly Asp
            740             745             750

Ser Gly Gly Pro Leu Val Cys Lys Ala Leu Ser Gly Arg Trp Phe Leu
            755             760             765

Ala Gly Leu Val Ser Trp Gly Leu Gly Cys Gly Arg Pro Asn Tyr Phe
        770             775             780

Gly Val Tyr Thr Arg Ile Thr Gly Val Ile Ser Trp Ile Gln Gln Val
785             790             795             800

Val Thr
```

<210> 114
<211> 359
<212> PRT
<213> Homo sapiens

<400> 114

```
Asp Leu Pro Pro Ser Cys Ser Pro Ala Ser Lys Met Arg Leu Gly Leu
 1               5                  10                  15

Leu Ser Val Ala Leu Leu Phe Val Gly Ser Ser His Leu Tyr Ser Asp
            20                  25                  30

His Tyr Ser Pro Ser Gly Arg His Arg Leu Gly Pro Ser Pro Glu Pro
            35                  40                  45

Ala Ala Ser Ser Gln Gln Ala Glu Ala Val Arg Lys Arg Leu Arg Arg
    50                  55                  60

Arg Arg Glu Gly Gly Ala His Ala Lys Asp Cys Gly Thr Ala Pro Leu
65                  70                  75                  80

Lys Asp Val Leu Gln Gly Ser Arg Ile Ile Gly Gly Thr Glu Ala Gln
                85                  90                  95

Ala Gly Ala Trp Pro Trp Val Val Ser Leu Gln Ile Lys Tyr Gly Arg
            100                 105                 110

Val Leu Val His Val Cys Gly Gly Thr Leu Val Arg Glu Arg Trp Val
        115                 120                 125

Leu Thr Ala Ala His Cys Thr Lys Asp Thr Ser Asp Pro Leu Met Trp
    130                 135                 140

Thr Ala Val Ile Gly Thr Asn Asn Ile His Gly Arg Tyr Pro His Thr
145                 150                 155                 160

Lys Lys Ile Lys Ile Lys Ala Ile Ile Ile His Pro Asn Phe Ile Leu
            165                 170                 175

Glu Ser Tyr Val Asn Asp Ile Ala Leu Phe His Leu Lys Lys Ala Val
            180                 185                 190

Arg Tyr Asn Asp Tyr Ile Gln Pro Ile Cys Leu Pro Phe Asp Val Phe
        195                 200                 205

Gln Ile Leu Asp Gly Asn Thr Lys Cys Phe Ile Ser Gly Trp Gly Arg
    210                 215                 220

Thr Lys Glu Glu Gly Asn Ala Thr Asn Ile Leu Gln Asp Ala Glu Val
225                 230                 235                 240

His Tyr Ile Ser Arg Glu Met Cys Asn Ser Glu Arg Ser Tyr Gly Gly
            245                 250                 255

Ile Ile Pro Asn Thr Ser Phe Cys Ala Gly Asp Glu Asp Gly Ala Phe
            260                 265                 270
```

Asp Thr Cys Arg Gly Asp Ser Gly Gly Pro Leu Met Cys Tyr Leu Pro
        275   280   285

Glu Tyr Lys Arg Phe Phe Val Met Gly Ile Thr Ser Tyr Gly His Gly
        290   295   300

Cys Gly Arg Arg Gly Phe Pro Gly Val Tyr Ile Gly Pro Ser Phe Tyr
305   310   315   320

Gln Lys Trp Leu Thr Glu His Phe Phe His Ala Ser Thr Gln Gly Ile
            325   330   335

Leu Thr Ile Asn Ile Leu Arg Gly Gln Ile Leu Ile Ala Leu Cys Phe
            340   345   350

Val Ile Leu Leu Ala Thr Thr
            355

<210> 115
<211> 288
<212> PRT
<213> Homo sapiens

<400> 115
Ser Pro Pro Gln Pro Arg Thr Pro Asp Cys Arg Leu Gln Ala Ser Leu
  1   5   10   15

Glu Ala Leu Ala Thr Leu Ala Pro Gln Pro Ser Asp Trp Leu Cys Phe
            20   25   30

Ala Asp Leu Gly Trp Phe Glu Ala Asp Gly Ala Ala His Ser Met Gly
        35   40   45

Leu Gly Ser Ser Leu Lys Trp Ala Trp Ala Lys Pro Ser Gly Met Pro
        50   55   60

Val Pro Glu Asn Asp Leu Val Gly Ile Val Gly Gly His Asn Ala Pro
65   70   75   80

Pro Gly Lys Trp Pro Trp Gln Val Ser Leu Arg Val Tyr Ser Tyr His
            85   90   95

Trp Ala Ser Trp Ala His Ile Cys Gly Gly Ser Leu Ile His Pro Gln
        100   105   110

Trp Val Leu Thr Ala Ala His Cys Ile Phe Trp Lys Asp Thr Asp Pro
        115   120   125

Ser Ile Tyr Arg Ile His Ala Gly Asp Val Tyr Leu Tyr Gly Gly Arg
        130   135   140

Gly Leu Leu Asn Val Ser Arg Ile Ile Val His Pro Asn Tyr Val Thr
145   150   155   160

Ala Gly Leu Gly Ala Asp Val Ala Leu Leu Gln Leu Pro Gly Ser Pro
            165   170   175

Leu Ser Pro Glu Ser Leu Pro Pro Pro Tyr Arg Leu Gln Gln Ala Ser
        180   185   190

Val Gln Val Leu Glu Asn Ala Val Cys Glu Gln Pro Tyr Arg Asn Ala
        195   200   205

Ser Gly His Thr Gly Asp Arg Gln Leu Ile Leu Asp Asp Met Leu Cys
    210   215   220

Ala Gly Ser Glu Gly Arg Asp Ser Cys Tyr Gly Asp Ser Gly Gly Pro
225   230   235   240

Leu Val Cys Arg Leu Arg Gly Ser Trp Arg Leu Val Gly Val Val Ser
            245   250   255

Trp Gly Tyr Gly Cys Thr Leu Arg Asp Phe Pro Gly Val Tyr Thr His
            260   ·265   270

Val Gln Ile Tyr Val Leu Trp Ile Leu Gln Gln Val Gly Glu Leu Pro
        275   280   285

<210> 116
<211> 45
<212> PRT
<213> Homo sapiens

<400> 116
Ile Ile Gly Gly His Glu Val Thr Pro His Ser Arg Pro Tyr Met Ala
  1   5   10   15

Ser Val Arg Phe Gly Gly Gln His His Cys Gly Gly Phe Leu Leu Arg
            20   25   30

Ala Arg Trp Val Val Ser Ala Ala Gln Cys Phe Ser His
            35   40   45

<210> 117
<211> 46
<212> PRT
<213> Homo sapiens

<400> 117
Gly Asp Ser Gly Gly Pro Leu Val Cys Glu Leu Asn Gly Thr Trp Val
  1   5   10   15

Gln Val Gly Ile Val Ser Trp Gly Ile Gly Cys Gly Arg Lys Gly Tyr
            20   25   30

Pro Gly Val Tyr Thr Glu Val Ser Phe Tyr Lys Lys Trp Ile
        35   40   45

<210> 118
<211> 309
<212> PRT
<213> Homo sapiens

<400> 118

```
Met Ala Gly Glu Gln Val Thr Ala Asn Val Ser Arg Tyr Pro Gly Gln
 1               5                   10                  15

Lys Thr Met Ser Phe Pro Glu Lys Thr Phe Leu Leu Ser Tyr Arg Ala
                20                  25                  30

Ser Leu Leu Ala Val Val Thr His Arg Ser Asn Asn Ser Arg Gly Arg
            35                  40                  45

Ala Phe Glu Ser Gln Val Leu Pro Asp Leu Thr Ala Gly Asp Ala Ala
        50                  55                  60

Asp Pro Pro Ile Pro Pro Leu Gly Pro Gly Ala Ala Leu Leu Lys Ser
65                  70                  75                  80

Gly Pro Phe Arg Ile Trp Gln Gly Val Lys Thr Lys Gly Glu Glu Gly
                85                  90                  95

Asp Arg Asp Thr Gly Thr Ala Gly Tyr Ala Phe Thr Leu Leu Leu Leu
            100                 105                 110

Leu Gly Ile Ser Gly Glu Pro Pro Glu Trp Val Cys Gly Arg Pro Thr
            115                 120                 125

Val Ser Ser Gly Ile Ala Ser Gly Leu Gly Ala Ser Val Gly Gln Trp
        130                 135                 140

Pro Trp Gln Val Ser Ile Arg Gln Gly Leu Ile His Val Cys Ser Asp
145                 150                 155                 160

Thr Leu Ile Ser Glu Glu Trp Val Leu Thr Val Ala Ile Cys Phe Pro
                165                 170                 175

Leu Ser Pro His Pro Asp Phe Gln Ala Asn Thr Ser Ser Ala Ile Ala
                180                 185                 190

Val Val Glu Leu Pro Ser Pro Val Ser Val Ser Pro Val Val Leu Leu
            195                 200                 205

Ile Cys Leu Pro Ser Ser Glu Val Tyr Leu Lys Lys Asn Thr Thr Ser
    210                 215                 220

Cys Trp Val Thr Gly Trp Gly Tyr Thr Gly Ile Phe Gln Tyr Ile Lys
225                 230                 235                 240

Arg Ser Tyr Thr Leu Lys Glu Leu Lys Val Pro Leu Ile Asp Leu Gln
                245                 250                 255

Thr Cys Gly Asp His Tyr Gln Asn Glu Ile Leu Leu His Gly Val Glu
            260                 265                 270
```

Leu Ile Ile Ser Glu Ala Met Ile Cys Ser Lys Leu Pro Val Gly Gln
        275   280   285

Met Asp Gln Cys Thr Val Arg Ile His Pro Ser Gly Thr Phe His Arg
        290   295   300

Pro Cys Leu Pro Gln
305

<210> 119
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: SNP

<400> 119
agaaggccta ygaagggg   18

<210> 120
<211> 22
<212> DNA
<213> Homo sapiens

<400> 120
gctgctgctg ctgctggtgc ag   22

<210> 121
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: SNP

<400> 121
ctaccctagc ygaggaaga   19

<210> 122
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: SNP

<400> 122
tggaatarct cggac   15

<210> 123
<211> 18
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: SNP

<400> 123
tggtaatccg kgtagagg   18

<210> 124
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: SNP

<400> 124
agagaaatay gagggtatt   19

<210> 125
<211> 21
<212> DNA
<213> Homo sapiens

<400> 125
ggtgggcatc atcagctggg g   21

<210> 126
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: SNP

<400> 126
taggggatga ycacctgct   19

<210> 127
<211> 14
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: SNP

<400> 127
gccggacsac tcgc   14

<210> 128
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: SNP

<400> 128
gagcatctgc vggagagag   19

<210> 129
<211> 15
<212> DNA
<213> Homo sapiens

<400> 129
tggagakaag aacac   15

<210> 130
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: SNP

<400> 130
gctctaccwc cacgccc   17

<210> 131
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: SNP

<400> 131
cgcacctgct cyaccaccac   20

<210> 132
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: SNP

<400> 132
ctgccagaag gayggagcct gg   22

<210> 133
<211> 16
<212> DNA
<213> Artificial Sequence

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<220>
<223> Description of Artificial Sequence: SNP

<400> 133
gtctgccara aggacg                                              16


<210> 134
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: SNP

<400> 134
gggtgactct ggmggccccc t                                       21


<210> 135
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: SNP

<400> 135
tgcatgggyg actctgg                                            17


<210> 136
<211> 16
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: SNP

<400> 136
gccgtgarca ccactg                                             16


<210> 137
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: SNP

<400> 137
agcggccasc attggcgt                                           18


<210> 138
<211> 18
<212> DNA
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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: SNP

<400> 138
gacatggawg tggacgac   18

<210> 139
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: SNP

<400> 139
acaattttty gagtgccca   19

<210> 140
<211> 20
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<220>
<223> Description of Artificial Sequence: SNP

<400> 140
acatacgccr gatttgtttg   20

<210> 141
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<220>
<223> Description of Artificial Sequence: SNP

<400> 141
tgggagcrgg tcctgcct   18

<210> 142
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<220>
<223> Description of Artificial Sequence: SNP

<400> 142
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<210> 143
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: SNP

<400> 143
agcgaggyct atcgcta   17

<210> 144
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<220>
<223> Description of Artificial Sequence: SNP

<400> 144
gggcgcatgc aragg   15

<210> 145
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: SNP

<400> 145
ccactgcact aaagacrcta g   21

<210> 146
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      peptide

<220>
<221> MOD_RES
<222> (1)
<223> pGlu

<400> 146
Glu Arg Thr Lys Arg
  1   5

<210> 147
<211> 20
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 147
ggagctgtcg tattccagtc   20

<210> 148
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 148
aacccctcaa gacccgttta g   21

<210> 149
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<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: His tag

<400> 149
His His His His His His
  1   5

<210> 150
<211> 16
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      illustrative DNA

<220>
<221> modified_base
<222> (15)
<223> a, c, g, t or any

<220>
<221> modified_base
<222> (16)
<223> a, c, g or t

<400> 150
gatcrywskm bvdhnn   16